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=> d all tot 179

L79 ANSWER 1 OF 34 HCAPLUS COPYRIGHT 2002 ACS
AN 1998:498818 HCAPLUS
DN 136:98506
TI Device for monitoring cells
IN Pittner, F. Bruce; Bemperly, John Jacob; Guarino, Richard D.; Wodnicka, Magdalena; Stitt, David T.; Burrell, Gregory J.; Foley, Timothy G., Jr.; Beaty, Patrick Shawn
PA **Becton, Dickinson and Company, USA**
SO U.S., 43 pp., Cont.-in-part of U.S. Ser. No. 715,187.
CODEN: USXXAM
DT Patent
LA English
IC ICM C12Q001-18
NCL 435032000
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 1, 4

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6096506	B1	20000801	US 1999-342720	19990629
	EP 509791	A1	19921021	EP 1992-303791	19920416
	EP 509791	B1	19960703		
	R: DE, FR, GB, IT				
	CA 2066929	AA	19921019	CA 1992-2066929	19920416
	JP 05137596	A2	19930601	JP 1992-98305	19920418
	JP 07073510	B4	19950809		
PRAI	US 1991-687359	B1	19910419		
	US 1994-358899	A2	19941219		
	US 1996-715187	A2	19960916		

AB The present invention relates to methods for detection and evaluation of metabolic activity of eukaryotic and/or prokaryotic cells based upon their ability to consume dissolved oxygen. The methods utilize a **luminescence** detection system which makes use of the sensitivity

of the **luminescent** emission of certain compds. to the presence of oxygen, which quenches (diminishes) the compd.'s **luminescent** emission in a **concn.** dependent manner. Respiring eukaryotic and/or prokaryotic cells will affect the oxygen **concn.** of a liq. medium in which they are immersed. Thus, this invention provides a convenient system to gather information on the presence, identification, quantification and cytotoxic activity of eukaryotic and/or prokaryotic cells by detg. their effect on the oxygen **concn.** of the media in which they are present.

ST device monitoring cell

IT Plates
(Microtitration; device for monitoring cells)

IT **Analytical apparatus**
Antibiotics
Bacteria (Eubacteria)
Biological materials
Blood
Blood serum
Cell
Cell proliferation
Chemicals
Coating materials
Composition
Concentration (condition)
Culture media
Cytotoxicity
Drugs
Escherichia coli
Eukaryota
Extracellular matrix
Fluorescence quenching
Impermeability
Insecta
Light
Liquids
Luminescence
Luminescence quenching
Luminescence spectroscopy
Luminescent substances
Mathematical methods
Metabolism
Microorganism
Molecules
Particles
Permeability
Prokaryote
Pseudomonas aeruginosa
Radiation
Reducing agents
Respiration, animal
Respiration, microbial
Sensors
Solutes
Wavelength
Wetting
Yeast
(device for monitoring cells)

IT Toxins
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(device for monitoring cells)

IT Reagents
RL: ANS (Analytical reagent use); ANST (Analytical study); USES (Uses)
(device for monitoring cells)

IT Plastics, analysis
PL: APU (Analytical role, unclassified); ANST (Analytical study)
(device for monitoring cells)
IT Rubber, analysis
PL: APU (Analytical role, unclassified); ANST (Analytical study)
(device for monitoring cells)
IT Silicone rubber, analysis
PL: APU (Analytical role, unclassified); ANST (Analytical study)
(device for monitoring cells)
IT **Growth** factors, animal
PL: BSU (Biological study, unclassified); BIOL (Biological study)
(device for monitoring cells)
IT Collagens, biological studies
PL: BSU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(device for monitoring cells)
IT Entactin
PL: BSU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(device for monitoring cells)
IT Laminins
PL: BSU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(device for monitoring cells)
IT Proteoglycans, biological studies
PL: BSU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(heparitin sulfate-contg.; device for monitoring cells)
IT **Optical detectors**
(**luminescence**; device for monitoring cells)
IT Animal cell
(mammal; device for monitoring cells)
IT Amino acids, biological studies
PL: BSU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(nonessential; device for monitoring cells)
IT Collagens, biological studies
PL: BSU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(type IV; device for monitoring cells)
IT 1499-18-1, 9,10-Diphenylanthracene 18153-62-0D, Tris-2,2'-bipyridylruthenium (II), salts 36309-88-3, Tris-4,7-diphenyl-1,10-phenanthroline ruthenium (II) chloride 50525-27-4, Tris-2,2'-bipyridylruthenium (II) chloride hexahydrate. 60378-04-6D, Tris-4,7-diphenyl-1,10-phenanthroline ruthenium (II), salts
PL: ARU (Analytical reagent use); ANST (Analytical study); USES (Uses)
(device for monitoring cells)
IT 7631-86-9, Silica, analysis
PL: APU (Analytical role, unclassified); ANST (Analytical study)
(device for monitoring cells)
IT 59-05-2, Methotrexate 151-21-3, Sodium didecyl sulfate, biological studies 865-21-4, Vinblastine 7757-83-7, Sodium Sulfite 7782-44-7, Oxygen, biological studies 26628-22-8, Sodium Azide 35607-66-0, Cefoxitin 55268-75-2, Cefuroxime 85721-33-1, Ciprofloxacin
PL: BSU (Biological study, unclassified); BIOL (Biological study)
(device for monitoring cells)
IT 57-92-1, Streptomycin, biological studies 113-24-6, Sodium pyruvate 1397-89-3, Fungizone 1406-05-9, Penicillin 113978-18-6, Matrigel 141307-41-7, Matrix metalloproteinase
PL: BSU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(device for monitoring cells)
RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
(1) Bacon, J; Anal Chem 1997, V59(23), P2780 HCAPLUS
(2) Berndt; US 6990574 A 2000
(3) Collins; US 6107082 A 2000
(4) Gentle; US 5946517 A 1998 HCAPLUS
(5) Goswami, K; Fiber Optic Chemical Sensor for the Measurement of Partial Pressure of Oxygen 1988, V990, P111
(6) Stitt; US 5567595 A 1996
(7) Walt; US 5244636 A 1993 HCAPLUS
(8) Wertz; US 4446134 A 1984
(9) Wolfbeis, O; Mikrochimica Acta 1986, V3(5-6), P359 HCAPLUS

L79 ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2002 ACS
AN 2002:16471 HCAPLUS
DN 136:196648
TI Method and apparatus for non-destructive screening of clinical specimen integrity
IN Ramsey-Ewar, James; Jacobs, Merrit Myles
PA One Cell Systems Inc., USA.
SO U.S., 23 pp., Cont.-in-part of U. S. Ser. No. 541,390, abandoned.
CODEN: USXXAM
DT Patent
LA English
IC ICM G01N033-48
NCL 356040000
CC 9-1 (Biochemical Methods)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6483471	B1	20020335	US 1997-871606	19970609 <--
PRAI	US 1995-541340	B2	19951010 <--		

AB A method and app. for providing a non-destructive pre-test screen of specimen integrity for a blood analyzer by measurement of absorbance or reflectance is provided. The method involves measurement of polychromatic **light** in the near IR and adjacent visible region, which is either transmitted or reflected from a specimen as presented for measurement, and correlation of the measurement, on the basis of predetd. **algorithms**, to the quantity of a known substance contained in the sample. The app. employs a spectrophotometer which emits radiation which is split into a beam which passes to a sample and a ref. beam, the beam returning from the sample and the ref. beam are variably combined and further sepd. into various components by means of a grating and focused onto a linear array detector. A microprocessor receives output from the array detector and performs **calcns.** of **concn.**(s) of the known substance(s). The invention provides quality assurance for state-of-the art blood analyzers and **automated** labs. by pre-screening serum and plasma integrity, even where labels on the sample container would normally interfere with a quality assurance assessment, identifying samples not suitable for certain blood tests, or, if tests are conducted on specimens with compromised integrity, the pre-screening results will aid in the interpretation of the test results.

ST app screening clin specimen

IT **Sensors**
(linear array; method and app. for non-destructive screening of clin. specimen integrity)

IT **Light**
(polychromatic; method and app. for non-destructive screening of clin. specimen integrity)

IT **Analysis**
(clin.; method and **app.** for non-destructive screening of clin. specimen integrity)

IT Absorption spectroscopy
Algorithm

Analytical apparatus
Blood analysis
Blood plasma
Blood serum
Concentration (condition)
Containers
Diffraction gratings
Frequency
Labels
Light
Mathematical methods
Molecules
Optical reflection
Optical transmission
Quality control
Radiation
Samples
Spectra
Spectrometers
Standard substances, analytical
Time
Turbidity
UV and visible spectroscopy
Wavelength
(method and app. for non-destructive screening of clin. specimen integrity)

IT Hemoglobins
RL: ANT (Analyte); ANST (Analytical study)
(method and app. for non-destructive screening of clin. specimen integrity)

IT **Computers**
(microprocessors; method and app. for non-destructive screening of clin. specimen integrity)

IT **IR radiation**
IR spectroscopy
(near-IR; method and app. for non-destructive screening of clin. specimen integrity)

IT Soybean oil
RL: ANT (Analyte); ANST (Analytical study)
(phospholipid-stabilized; method and app. for non-destructive screening of clin. specimen integrity)

IT 114-25-0, Biliverdin 635-65-4, Bilirubin, analysis
RL: ANT (Analyte); ANST (Analytical study)
(method and app. for non-destructive screening of clin. specimen integrity)

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Anon; CA 2018011 1994
(2) Coggeshall; US 3701736 A 1972
(3) Heinemann; US 5391994 A 1994
(4) Jacobs; US 5846492 A 1998
(5) Jacques; US 5373799 A 1994
(6) Karkar; US 5066859 A 1991
(7) Lindsgaard; US 5261646 A 1994
(8) Lindsgaard; US 5366903 A 1994
(9) McNeal; US 5734466 A 1998
(10) Putratz; US 5561695 A 1994
(11) Purdy; US 5660004 A 1994

L79 ANSWER 3 OF 24 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:865529 HCAPLUS
DN 136:17937
TI System and method for analyzing antibiotic susceptibility of biological

samples
IN **Wiles, Timothy M.; Turner, David J.; O'connell, Michael A.; Parmigiani, Giovanni; Clyde, Merlise**
PA **Becton, Dickinson and Co., USA**
SO Eur. Pat. Appl., 32 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM **G01N021-31**
CC **10-5** (Microbial, Algal, and Fungal Biochemistry)
Section cross-reference(s): 1
PAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 1160564	A2	20011205	EP 2001-111413	20010510 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002121697	A2	20020426	JP 2001-160395	20010529 <--
PRAI US 2000-583891	A	20000531 <--		

AB A system and method for analyzing samples, such as biol. samples, to accurately and effectively det. the susceptibility of the samples to antimicrobial materials, to det. min. inhibitory **concn.** (MIC) values for the resp. samples and antimicrobial materials. At each of a **plurality** of **time intervals**, the system and method directs a **plurality** of different analyzing **light wavelengths**, such as red, green and blue **wavelengths**, onto each of a **plurality** of sample wells, and detects a resp. resultant **light wavelength** emanating from the resp. sample wells for each of the analyzing **light wavelengths**. The system and method uses resultant **light wavelengths** to generate at least two **growth** indicator characteristic curves representing, for example, the **redox** state and **turbidity** characteristics of the sample wells. The system then uses the **redox** state and **turbidity** characteristics of sample wells contg. the same antimicrobial material to det. the MIC value for that material in relation to the sample contained in those wells.
ST antibiotic susceptibility biol sample
IT Antibiotics
Antimicrobial agents
Computer application
Drug screening
Mathematical methods
Measuring apparatus
Redox potential
Turbidity
(system and method for analyzing antibiotic susceptibility of biol. samples)

L19 ANSWER 4 OF 34 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:81705 HCAPLUS
DN 135:128025
TI Method for non-invasive spectrophotometric blood oxygenation monitoring
IN Benni, Paul
PA Gas Medical Systems, Inc., USA
SO PCT Int. Appl., 55 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM **G01N**
CC **9-1** (Biochemical Methods)
PAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI	WO 2001034107	A2	20011107	WO 2001-US13875	20010430 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 2001059388	A5	20011112	AU 2001-59388	20010430 <--
PRAI	US 2000-201590P	P	20000502 <--		
	WO 2001-US13875	W	20010430		

AB A method and app. for non-invasively detg. the blood oxygen satn. level within a subject's tissue is provided that utilizes a near IR spectrophotometric (NIRS) sensor capable of transmitting a **light** signal into the tissue of a subject and sensing the **light** signal once it has passed through the tissue via transmittance or reflectance. The method includes the step of detg. attenuation of the **light** signal as the sum of: (i) attenuation attributable to deoxyHb; (ii) attenuation attributable to oxyHb; and (iii) attenuation attributable to **light** scattering within the subject's tissue. The present method also makes it possible to account for attenuation attributable to fixed or const. **light** absorbing biol. tissue components, and attenuation attributable to variable characteristics of the sensor. By detg. differential attenuation as a function of **wavelength**, the attenuation attributable to tissue **light** scattering characteristics, fixed **light** absorbing components, and measuring app. characteristics are **math**. cancelled out or minimized relative to the attenuation attributable to deoxyHb, and attenuation attributable to oxyHb.

ST noninvasive spectrophotometric blood oxygenation monitoring

IT Information systems
(data; method for non-invasive spectrophotometric blood oxygenation monitoring)

IT Animal tissue
Blood analysis
Calibration
Concentration (condition)
Light
Light scattering
Mathematical methods
Optical absorption
Optical reflection
Optical transmission
Oxygenation
Wavelength
(method for non-invasive spectrophotometric blood oxygenation monitoring)

IT Hemoglobins
Hemoglobins, oxyhemoglobins
RL: ANT (Analyte); ANST (Analytical study)
(method for non-invasive spectrophotometric blood oxygenation monitoring)

IT **Sensors**
(near IR spectrophotometric; method for non-invasive spectrophotometric blood oxygenation monitoring)

IT **IR spectrometers**
IR spectroscopy
(near-IR; method for non-invasive spectrophotometric blood oxygenation monitoring)

IT **Gas sensors**

oxygen; method for non-invasive spectrophotometric blood oxygenation monitoring)

IT 7782-44-7, Oxygen, analysis
RL: ANT (Analyte); ANST (Analytical study)
(sensors; method for non-invasive spectrophotometric blood oxygenation monitoring)

L79 ANSWER 1 OF 24 HCAPLUS COPYRIGHT 2001 ACS
AN 2001:640972 HCAPLUS
DN 135:177654
TI Method and apparatus for determining the sensitivity of a microorganism to a **growth** altering agent
IN Wardlaw, Stephen C.
PA USA
SO U.S., 9 pp., Cont.-in-part of U.S. 6,022,734.
CODEN: USXXAM
DT Patent
LA English
IC ICM C12M001-16
ICS C12Q001-18
NCL 435286700
CC **9-1** (Biochemical Methods)
Section cross-reference(s): 1, **10**
FAN.CNT 7

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	US 6235526	B1	20010522	US 2000-477932	20000105	<--
	US 6022734	A	20000208	US 1999-256451	19990223	<--
	US 6140069	A	20001031	US 1999-256451	19990223	<--
	WO 2000044450	A	20000803	WO 2000-4480	20000306	<--
	WO 2000044450	A	20010705	WO 2001-43	20010104	<--
	EP 1204467	A2	20020515	EP 2001-300967	20010205	<--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
	JP 2001218597	A2	20010814	JP 2001-330	20010105	<--
	CN 1303986	A	20010718	CN 2001-117954	20010109	<--
PRAI	US 1998-77216P	P	19980227	<--		
	US 1998-77217P	P	19980227	<--		
	US 1999-256451	A2	19990223	<--		
	US 1999-256451	A2	19990223	<--		
	WO 1999-US4511	W	19990302	<--		
	US 2000-477932	A	20000105	<--		

AB A method and an app. for detg. the **concn.** at which a **growth**-altering agent has an appreciable effect on the **growth** of a target microorganism are provided. The method comprises the steps of (a) providing a microorganism **growth** medium; (b) providing a sensible reagent, which includes a **growth** -altering agent mixed with a marker that has a signal with a magnitude proportional to the **concn.** of the marker; (c) incorporating the sensible reagent into the **growth** medium, in a manner that creates a gradient of **growth**-altering agent and marker **concns.** within the **growth** medium; (d) inoculating the **growth** medium with the target microorganism; (e) incubating the inoculated **growth** medium for a period of **time** sufficient for the target microorganism to **grow** a detectable amt.; (f) evaluating **growth** characteristics of the microorganism in a region contg. the **growth**-altering agent, (g) measuring the magnitude of the marker signal in that region; and (h) detg. the **concn.** of the **growth**-altering agent using the measured magnitude of the marker signal.

ST app detg microorganism **growth** agent

IT Molecules
(**Growth** altering; method and app. for detg. sensitivity of a

microorganism to a **growth** altering agent)

IT **Fluorometers**
(Scanning; method and app. for detg. sensitivity of a microorganism to a **growth** altering agent)

IT Antimicrobial agents
Apparatus
Concentration (condition)
Culture media
Growth, microbial
Light scattering
Mathematical methods
Microorganism
Mixing
Sensors
Time
(method and app. for detg. sensitivity of a microorganism to a **growth** altering agent)

IT Reagents
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(method and app. for detg. sensitivity of a microorganism to a **growth** altering agent)

RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Anon; EP 0635126 B1 1999 HCAPLUS
(2) Baer; US 5547849 1996 HCAPLUS
(3) Blume; US 3925166 1975
(4) Ericsson; US 4778758 1988
(5) Ericsson; US 5028529 1991 HCAPLUS
(6) Ericsson; US 5644611 1997
(7) Kjellander; US 4204045 1980
(8) Lancaster; US 5501959 1996 HCAPLUS
(9) McCoy; US 5700084 1997 HCAPLUS
(10) Mason; US 4790640 1988
(11) Nishimura; US 5427959 1995
(12) Robertson; US 5206151 1993 HCAPLUS
(13) Schalkowsky; US 4514495 1985 HCAPLUS
(14) Schalkowsky; US 5246837 1993
(15) Schalkowsky; US 5563043 1996 HCAPLUS
(16) Smith; US 4950455 1990
(17) Thompson; US 5164301 1992 HCAPLUS
(18) Westerberg; US 4034430 1977 HCAPLUS
(19) Wardlaw; US 6022734 2000 HCAPLUS
(20) Wardlaw; US 6140069 2000 HCAPLUS

L79 ANSWER 6 OF 34 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:648640 HCAPLUS
DN 135:177714
TI Method for extending the range of an immunoassay
IN Wei, Tie Quan; Pankratz, Thomas John; Chu, Victor Pichai
PA Dade Behring Inc., USA
SO U.S., 13 pp., Cont.-in-part of U.S. Ser. No. 166,026, abandoned.
CODEN: USXXAM
DT Patent
LA English
IC ICM **G01N033-53**
ICS **G01N033-543; G01N021-00;** A61K039-00; C07K016-00
NCL 435007100
CC 9-10 (Biochemical Methods)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6284472	B1	20010904	US 1999-294489	19990420 <--

PRAI US 1998-166026 B2 19981005 <--
AB Calibrating an immunoassay by generating two reaction rate measuring curves, from samples having higher and lower relative levels of antigen, extrapolating a combination of the curves to cover sample **concns** . known to contain an excess of antigen relative to an amt. of capture reagent and combining the low end linear potion of the higher reaction rate measuring curve with the higher end portion of the extrapolated reaction rate measuring curve, thereby eliminating measuring inaccuracies otherwise arising from the hook effect. For antigen **concns.** higher than the assay range, a high antigen signal utilizing the two rates avoids reporting false results.
ST extending range immunoassay
IT Proteins, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(C-reactive; method for extending range of immunoassay)
IT Reagents
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(Capture; method for extending range of immunoassay)
IT Calibration
Concentration (condition)
Immunoassay
Mathematical methods
Reaction kinetics
Regression analysis
Samples
Volume
(method for extending range of immunoassay)
IT Antigens
RL: ANT (Analyte); ANST (Analytical study)
(method for extending range of immunoassay)
IT Immunoassay
(**turbidimetric**; method for extending range of immunoassay)
RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Chadney; US 5514[illegible] 1996 HCAPLUS
(2) Cragle; US 45[illegible]661 1986 HCAPLUS
(3) Diamandis; US 50[illegible] 1992 HCAPLUS
(4) Frengen; US 57[illegible] 1998 HCAPLUS
(5) Frengen; US 57[illegible] 1998 HCAPLUS
(6) Graham; US 47[illegible] 1988 HCAPLUS
(7) Hirai; US 54[illegible] 199[illegible] HCAPLUS
(8) Kappe; US 40[illegible] 1977 HCAPLUS
(9) Kaspar; US 496083[illegible] 1990 HCAPLUS
(10) Lindmo; US 55[illegible]241 1996
(11) Oh; US 5583055 1996 HCAPLUS
(12) Oh; US 57[illegible] 199[illegible] HCAPLUS
(13) Rodriguez; US 41[illegible] 1979 HCAPLUS
(14) Romelli; US 5[illegible] 1995 HCAPLUS
(15) Schafer; US 5420[illegible] 1995 HCAPLUS
(16) Tung; US 4788139 1988 HCAPLUS
(17) Wu; US 4358852 198[illegible]
(18) Yamada; US 5[illegible] 1995

L79 ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:[illegible]95403 HCAPLUS
DN 135:149576
TI **Automated** optical reader for **multiple** samples, especially for nucleic acid assays
IN Andrews, Jeffrey P.; O'Keefe, Christian V.; Scrivens, Brian G.; Pope, Willard C.; Hansen, Timothy; Failing, Frank
PA **Becton, Dickinson and Company, USA**
SO Eur. Pat. Appl., 46 pp.
CODEN: EPXXDW

DT Patent
LA English
IC ICM **G01N021-64**
CC 4-1 (Biochemical Methods)
Section cross-reference(s): 3
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1134126	A2	20010816	EP 2000-1[illegible]3062	20001221
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2001255272	A2	20010921	JP 2001-6091	20010115
PRAI	US 2000-483686	A	20000114		

AB An app. and method employ a **plurality** of **light** emitting devices which each can get **light** through a resp. optical fiber toward a resp. sample of a **plurality** of samples in a **time**-staggered manner. **Light** is generated in each of the samples at different **times** consistent with the **times** at which **light** is irradiated onto the sample. A single detector is used to detect the **lights** emitted from the **plurality** of samples at these different **times**. A **plurality** of bifurcated optical cable are coupled to the **light** emitting devices and single **light** detector, and the integrated end of each bifurcated cable acts as the **light** emitting port and **light** detecting port. **Multiple** targets can be detected from each of the **plurality** of samples in the same manner by providing an app. and method employing a different **plurality** of **light** emitting devices and single detector for each target to be detected.

ST **automated** optical reader app nucleic acid assay; **multiple** sample **automated** analysis app

IT Samples
(anal. of **multiple**; **automated** optical reader for **multiple** samples, esp. for nucleic acid assays)

IT Analysis
Process **automation**
(**automated** anal.; **automated** optical reader for **multiple** samples, esp. for nucleic acid assays)

IT **Algorithm**
Electroluminescent devices
Fluids
Light sources
Optical cables
Optical detectors
Optical fibers
Photomultipliers
(**automated** optical reader for **multiple** samples, esp. for nucleic acid assays)

IT Nucleic acids
RL: ANT (Analyte); ANST (Analytical study)
(**automated** optical reader for **multiple** samples, esp. for nucleic acid assays)

IT Probes (nucleic acid)
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(**automated** optical reader for **multiple** samples, esp. for nucleic acid assays)

IT **Analytical apparatus**
(**automated**; **automated** optical reader for **multiple** samples, esp. for nucleic acid assays)

IT **Computers**
(microcomputers; **automated** optical reader for **multiple** samples, esp. for nucleic acid assays)

IT Microtiter plates

(microwell arrays; **automated** optical reader for **multiple** samples, esp. for nucleic acid assay)

L79 ANSWER 8 OF 74 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:417242 HCAPLUS
DN 135:16356
TI Method of measuring tissue hemoglobin saturation using gaussian decomposition
IN Wilson, David A.
PA Johns Hopkins University, USA
SO PCT Int. Appl., 76 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM **G01N021-35**
ICS A61B005-00
CC 9-5 (Biochemical Methods)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001040776	A1	20010607	WO 2000-US33830	20001204 <--

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 1999-169452P P 19991202 <--

AB The constituents of cerebral tissues that contribute to **light** absorbency, i.e., oxyHb, deoxyHb, water, lipid, cytochrome oxidase and a component for characterizing **light** loss due to scattering, are further characterized and used to construct a model system that emulates cerebral tissue reflectance spectra in a variety of conditions. Using this model system in a reverse mode, compd. spectra collected from brain tissue are decompd. into individual spectra features. The values for features attributable to oxyHb and deoxyHb are then used to construct a ratio that quantifies the percentage of total Hb that contains oxygen. Because the major portion of **light**, collected by the detecting element of the equipment has transited through brain tissue, this ratio becomes a quant. measure of brain tissue Hb satn. The decompn. anal. method is generally applicable to a variety of tissues besides brain tissue.

ST tissue Hb satn gaussian decompn

IT Energy
(**Light**; method of measuring tissue Hb satn. using gaussian decompn.)

IT Animal tissue
Apparatus
Brain
Databases
Light
Light scattering
Mathematical methods
Optical absorption
Oxygenation
Reflection spectra
(method of measuring tissue Hb satn. using gaussian decompn.)

IT Hemoglobins
Hemoglobins, oxyhemoglobins
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical

study); BIOL (Biological study)
(method of measuring tissue Hb satn. using gaussian decompn.)
IT Lipids, biological studies
PL: BSU (Biological study, unclassified); PEP (Properties); BIOL (Biological study)
(method of measuring tissue Hb satn. using gaussian decompn.)
IT IR spectroscopy
(near-IR; method of measuring tissue Hb satn. using gaussian decompn.)
IT 7782-44-7, Oxygen, analysis
PL: ANT (Analyte); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(method of measuring tissue Hb satn. using gaussian decompn.)
IT 7732-18-5, Water, biological studies 9001-16-6, cytochrome oxidase
PL: BSU (Biological study, unclassified); PEP (Properties); BIOL (Biological study)
(method of measuring tissue Hb satn. using gaussian decompn.)
RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Benni, P; PROCEEDINGS OF THE ANNUAL NORTHEAST BIOENGINEERING CONFERENCE 1998, VOLUME 24, P165
(2) Cleve, E; TEXTILVEREDLUNG 1995, V30(7/08), P169
(3) Deppe, J; US 5743262 A 1998
(4) Mannheimer, P; US 5782237 A 1998
(5) Matcher, S; PHYSICS IN MEDICINE AND BIOLOGY 1994, V39(8), P1295
(6) Steinman, R; APPLIED SPECTROSCOPY 1999, V53(1), P25 HCAPLUS

L79 ANSWER 9 OF 24 HCAPLUS COPYRIGHT 2012 ACS
AN 2001:376867 HCAPLUS
DN 134:45625
TI Method and scattered **light**-measuring apparatus for measuring a scattered **light** and method of urinalysis using the same
IN Kawamura, Tatsuro
PA Matsushita Electric Industrial Co., Ltd., Japan
SO Eur. Pat. Appl., 21 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM **G01N021-51**
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 73
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1102059	A1	20010523	EP 2000-125013	20001118 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2001330566	A2	20011130	JP 2000-321074	20001020 <--
PRAI	JP 1999-331786	A	19991118 <--		

AB The present invention provides a method and an app. which eliminate the influences of a scattered **light** arising due to the pollutants inside and on the surfaces of an optical window, differences in refractive index and **light** transmittance of a soln. to be detected, and the obstruction due to suspending particles and the like to achieve a measurement with high precision and high practicability in the measurement of the scattered **light**. The scattered **light** propagating within a prescribed angle perpendicularly to the direction of propagation of the **light** to be propagated through the inside of the soln. is measured. Further, the position of the optical axis of the **light** to be propagated through the inside of the soln. and/or the position of the photosensor in the direction of the optical axis are set so that the influence of the scattered **light** arising at and on the surface of the optical axis is not more than a predetd. value within a

practically allowable range. The protein **concn.** in urine was detd. by measuring **turbidity** after heat treatment.

ST scattered **light** measuring app urinalysis; protein urine scattered **light** analysis

IT Proteins, general, analysis
PL: ANT (Analyte); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process)
(coagulation in urine for detg. protein **concn.**; method and scattered **light**-measuring app. for measuring scattered **light** and method of urinalysis using same)

IT Particles
(interfering; method and scattered **light**-measuring app. for measuring scattered **light** and method of urinalysis using same)

IT UV and visible spectroscopy
(**light**-scattering; method and scattered **light** -measuring app. for measuring scattered **light** and method of urinalysis using same)

IT **Light scattering**
Mathematical methods
Polarized light
Refractive index
Urine analysis
(method and scattered **light**-measuring app. for measuring scattered **light** and method of urinalysis using same)

IT Reagents
PL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(method and scattered **light**-measuring app. for measuring scattered **light** and method of urinalysis using same)

IT **Optical instruments**
(scatterometers; method and scattered **light**-measuring app. for measuring scattered **light** and method of urinalysis using same)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Barber, D; US 5340178 A 1994 HCAPLUS
(2) Canon Kk; EP 0495125 A 1991 HCAPLUS
(3) de Maeyer Leo, C; US 4076421 A 1978
(4) Kowa Co; EP 0301770 A 1988

L79 ANSWER 18 OF 34 HCAPLUS COPYRIGHT 2002 ACS
AN 2000:807747 HCAPLUS
DN 133:331765
TI Device and procedure for the monitoring and control of microorganism populations in biologically active fluids
IN Roeffen, Thomas; Holzhauer, Peter; Walitza, Eckehard
PA Fraunhofer-Gesellschaft zur Foerderung der Angewandten Forschung EV, Germany
SO Ger. Offen., 12 pp.
CODEN: GWXXBX
DT Patent
LA German
IC ICM C12Q0001-02
CC **9-1** (Biochemical Methods)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19921999	A1	20001116	DE 1999-19921999	19990512 <--
	WO 2000070078	A2	20001123	WO 2000-EP4289	20000512 <--
	WO 2000070078	A3	20010301		

W: CA, JP, US
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

EP 1176174 A2 20020123 EP 2000-936736 20000512 <--
P: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI
PRAI DE 1999-19921939 A 19990511 <--
WO 2000-EP4289 W 20000511 <--

AB A data acquisition mechanism and subsequent data processing are used to monitor metabolic parameters in a biol. active fluid so as to detn. the **concn.** of organisms. Thus, metabolic products or substrates such as carbon dioxide, hydrogen, oxygen, etc., may be monitored to define bacterial or fungal populations in fluids.

ST microorganism monitoring metabolite liq control app

IT **Algorithm**
Bacillus (bacterium genus)
Bacillus subtilis
Candida
Clostridium
Control apparatus
Data processing
Desulfotomaculum
Electric conductivity
Enterobacteriaceae
Enterococcus
Escherichia coli
Lactobacillus
Leuconostoc
Liquids
Methanobacterium
Methanococcus
Micrococcus
Pseudomonas
Pseudomonas aeruginosa
Redox potential
Saccharomyces
Sarcina
Sensors
Staphylococcus
Streptococcus
pH
(device and procedure for monitoring and control of microorganism populations in biol. active fluids)

IT **Computers**
(microprocessors; device and procedure for monitoring and control of microorganism populations in biol. active fluids)

IT Aerobic bacteria
(spore-forming; device and procedure for monitoring and control of microorganism populations in biol. active fluids)

IT 50-21-5, Lactic acid, analysis 64-17-5, Ethanol, analysis 64-18-6, Formic acid, analysis 64-19-7, Acetic acid, analysis 67-64-1, Acetone, analysis 71-23-8, Propanol, analysis 71-36-3, Butanol, analysis 74-82-8, Methane, analysis 107-92-6, Butyric acid, analysis 124-38-9, Carbon dioxide, analysis 1333-74-0, Hydrogen, analysis 3812-32-6, Carbonate, analysis 7664-41-7, Ammonia, analysis 7727-37-9, Nitrogen, analysis 7782-44-7, Oxygen, analysis 7783-06-4, Hydrogen sulfide, analysis 14797-55-8, Nitrate, analysis 14797-65-0, Nitrite, analysis 14798-03-9, Ammonium, analysis 18496-25-8, Sulfide
RL: ANT (Analyte); ANST (Analytical study)
(device and procedure for monitoring and control of microorganism populations in biol. active fluids)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
(1) Anon; DE 19605755 A1 HCAPLUS
(2) Anon; DE 4415444 A1 HCAPLUS
(3) Endo, H; Fisheries Science (Tokyo) 1996, V62(2), P235 HCAPLUS

(4) Kroll, R; J Appl Bacteriol 1989, V66(2), P209 HCAPLUS

L79 ANSWER 11 OF 24 HCAPLUS COPYRIGHT 2002 ACS
AN 2000:790744 HCAPLUS
DN 133:319814
TI A combined rapid anti-microbial susceptibility assay and microorganism identification system
IN William, Gregory R.; Nothaft, Daniel; Enscoe, Glenn F.; Burtner, Kathleen M.; Rangas, Monte
PA Dade Microscan Inc., USA
SO PCT Int. Appl., 56 pp.
CODEN: PIXXD2
DT Patent
LA English
IC **G01N035-02**; C12M001-34; C12M001-40
CC **9-16** (Biochemical Methods)
Section cross-reference(s): 1, **10**
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000067037	A2	20001109	WO 2000-US12751	20000501 <--
	WO 2000067037	A3	20010111		
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1177448	A2	20020206	EP 2000-930540	20000501 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
PRAI	US 1999-131609P	P	19990429 <--		
	US 1999-137814P	P	19990607 <--		
	US 2000-565213	A	20000504 <--		
	WO 2000-US12751	W	20000501 <--		

AB In response to the need for highly-sensitive antibiotic susceptibility assays and identification assays that do not require extensive incubation **times**, the present invention provides **automated** assay methods and systems that permit the detn. of antibiotic susceptibilities and/or microorganism identification in a **time** frame that is substantially shorter than had previously been attainable using a hybrid system that combines **turbidimetric** and **fluorescence** detns. using a single, clear-plastic assay platform. Related devices, kits, and components thereof are also disclosed.
ST microbial susceptibility assay microorganism system
IT **Colorimetry**
(Bichromatic; a combined rapid anti-microbial susceptibility assay and microorganism identification system)
IT **Computers**
(Central processing units; a combined rapid anti-microbial susceptibility assay and microorganism identification system)
IT **Optics**
(**Multiple wavelength**; a combined rapid anti-microbial susceptibility assay and microorganism identification system)
IT Plates
(**Multiwell**; a combined rapid anti-microbial susceptibility assay and microorganism identification system)
IT Plates
(Plastic sample; a combined rapid anti-microbial susceptibility assay

and microorganism identification system)
IT **Algorithm**
Analytical apparatus
Antibiotics
Antimicrobial agents
Apparatus
Color
Colorimeters
Colorimetry
Computer application
Culture media
Dyes
Enterobacteriaceae
Fluorescent substances
Fluorometers
Fluorometry
Gram-negative bacteria
Gram-positive bacteria (Firmicutes)
Inks
Interface
Liquids
Microorganism
Mixing
Paints
Suspensions
Temperature
Test kits
Time
Turbidimetry
(a combined rapid anti-microbial susceptibility assay and microorganism identification system)
IT Reagents
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(a combined rapid anti-microbial susceptibility assay and microorganism identification system)
IT Plastics, uses
RL: NUU (Other use, unclassified); USES (Uses)
(a combined rapid anti-microbial susceptibility assay and microorganism identification system)
IT Analysis
Process **automation**
(**automated** anal.; a combined rapid anti-microbial susceptibility assay and microorganism identification system)
IT Construction materials
(boards; a combined rapid anti-microbial susceptibility assay and microorganism identification system)
IT **Light**
(**fluorescent**; a combined rapid anti-microbial susceptibility assay and microorganism identification system)
IT Wells
(**multi-**; a combined rapid anti-microbial susceptibility assay and microorganism identification system)
IT **Opacity**
(opacification; a combined rapid anti-microbial susceptibility assay and microorganism identification system)
IT Laboratory ware
(reaction vessels; a combined rapid anti-microbial susceptibility assay and microorganism identification system)
IT Containers
(reaction; a combined rapid anti-microbial susceptibility assay and microorganism identification system)
IT Hydration, chemical

(rehydration; a combined rapid anti-microbial susceptibility assay and microorganism identification system)

IT 9035-73-9, Oxidase
PL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(a combined rapid anti-microbial susceptibility assay and microorganism identification system)

L79 ANSWER 12 OF 24 HCAPLUS COPYRIGHT 2002 ACS
AN **2000:697799** HCAPLUS
DN **134:41258**
TI Evaluation of **turbidity**: correlation between Kerstez **turbidimeter** and nephelometric **turbidimeter**
AU Collado-Fernandez, M.; Gonzalez-Sanjose, M. L.; Rino-Navarro, R.
CS Department of Biotechnology and Food Science, University of Burgos, Burgos, Spain
SO Food Chemistry (**2000**), 71(4), 461-466
CODEN: FOCHDJ; ISSN: 0308-8146
PB Elsevier Science Ltd.
DT Journal
LA English
CC 17-1 (Food and Feed Chemistry)
AB **Turbidity** is a quality parameter that has an important role in food liq. acceptance. **Cloudiness** of beverages and covering liq. are a consequence of manuf. processes and storage conditions. Spanish legislation defines the covering liq. **turbidity** in canning by Kerstez **turbidimeter** units (KTU), which is a sensorial measure. It is necessary to find a correlation between sensorial and instrumental measurements. This work studied the relationship between KTU and nephelometric **turbidimeter** units (NTU) and established a **math.** model, which allowed the expression of the **turbidity** of liq. products in KTU from measurements in nephelometric **turbidimeter** units. This **math.** model corresponds to a non-linear simple correlation model (KTU/NTU). The best adjustment was a Reciprocal-Y model.
ST food analysis **turbidimetry** nephelometry
IT Food analysis
Nephelometry
Simulation and Modeling, physicochemical
Turbidimetry
(correlation between Kerstez **turbidimeter** and nephelometric **turbidimeter** in food anal.)
IT **Measuring apparatus**
Optical instruments
(**turbidimeters**; correlation between Kerstez **turbidimeter** and nephelometric **turbidimeter** in food anal.)
RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Anon, C; Food Chemistry 1996, V55(1), P91 HCAPLUS
(2) BOE; Normas de calidad de conservas vegetales 1984, 287, 288 and 289, 30-XI, 1-XII and 2-XII
(3) Calvo, C; Informacion tecnica general 1971, 55, P1
(4) Calvo, C; Revista de Agroquimica y Tecnologia de Alimentos 1980, V20(1), P144
(5) Dickinson, E; An introduction to food colloids 1992
(6) Dickinson, E; Food Chemistry 1994, V51, P343 HCAPLUS
(7) Duran, L; Revista de Agroquimica y Tecnologia de Alimentos 1976, V16(1), P99
(8) Farinato, R; Encyclopedia of emulsion technology 1983, V1, P447
(9) Genovese, D; Journal of Food Science 1997, V62(6), P1171 HCAPLUS
(10) Hernandez, E; Journal of Food Science 1991, V56, P747
(11) Kramer, A; Food Technology 1969, V23, P92

(12) Markowski, J; Fruit Processing 1998, V7, P277
(13) Martin Belloso, O; Temas de tecnologia de conservas vegetales 1990, P87
(14) Martinez Baigorri, E; Conservas vegetales 1984, 5, P9
(15) Primo Yufera, E; Quimica agricola 1987, V3, P373

L79 ANSWER 15 OF 24 HCAPLUS COPYRIGHT 2002 ACS
AN 2000:638135 HCAPLUS
DN 133:216405
TI **Computerized** method and apparatus for analyzing nucleic acid assay reading
IN Yang, Harry; Schwarz, Daniel L.; Embres, Christopher M.; Moore, Richard L.; Harland, Perry D.; Johnson, Paula V.
PA **Becton, Dickinson and Company, USA**
SO Jpn. Kokai Tokkyo Koho, 64 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM **G01N033-50**
ICS C12Q001-68; C12N015-09
CC 9-1 (Biochemical Genetics)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000249701	A	20000914	JP 1999-329984	19991119
	US 6316349	B1	20011113	US 1998-196123	19981120
PRAI	US 1998-1961_3	A	19981120		

AB A **computerized** method and app. are disclosed for analyzing numerical data pertaining to a sample assay comprising at least one biol. or chem. sample. The data include a set of data pertaining to each resp. sample, with each set of data including a **plurality** of values each representing a condition of the sample at a given **time**. The method and app. assign a resp. numerical value to each of the data values, **math**. combine the numerical values to generate a total value, compare the total value to a threshold value, and control the system to indicate whether the sample has a predetd. characteristic based on a result of the comparison. Prior to **calcn**. of the sample value, filtering, normalizing and other correcting operations can be performed on the data to correct anomalous values in the data which could adversely affect the accuracy of the results. The method and app. perform the described functions by representing the data values as points on a graph having a vertical axis representing the magnitudes of the values and a horizontal axis representing a period of **time** during which readings of the sample were taken to obtain the data values, identifying points on the graph having an anomalous characteristic, and correcting the anomalous points to produce a corrected plot of points on the graph, with each of the points of the cor. plot representing a magnitude of a corresponding one of the values. An area value is then **calcd**. which represents an approx. area between at least a portion of the cor. plot of points on the graph and the horizontal axis. The area value is compared to a threshold value to det. whether a certain condition exists in the sample to which the set of data pertains. Diagrams describing the app. assembly and the operation flow are given.

ST **computer** analyzer nucleic acid assay reading
IT **Analysis**
Analytical apparatus
(biochem.; **computerized** method and **app**. for analyzing nucleic acid assay reading)
IT **Computer** application
Samples
(**computerized** method and app. for analyzing nucleic acid assay reading)
IT Nucleic acids
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical

study); BIOL (Biological study)
(**computerized** method and app. for analyzing nucleic acid assay reading)
IT Information systems
(data; **computerized** method and app. for analyzing nucleic acid assay reading)

L79 ANSWER 14 OF 34 HCAPLUS COPYRIGHT 2002 ACS
AN 2000:313852 HCAPLUS
DN 133:114819
TI **Multivariate** statistics for energy-dispersive x-ray **fluorescence** analysis of chemical substances
IN Henrich, Alexander; Itzel, Hans-Helmut; Hoffmann, Peter; Ortner, Hugo
PA Merck Patent G.m.b.H., Germany
SO PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DT Patent
LA German
IC ICM **G01N023-20**
CC 79-2 (Inorganic Analytical Chemistry)
Section cross-reference(s): 74
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000024761	A2	20000427	WO 2000-EP70	20000107 <--
	WO 2000024761	A3	20001130		
	W: JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	DE 19921317	A1	20000427	DE 1999-19921317	19990508 <--
	EP 1144986	A2	20011017	EP 2000-901071	20000107 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRAI	DE 1998-19850617	A	19981103 <--		
	DE 1999-19921317	A	19990508 <--		
	WO 2000-EP70	W	20000107 <--		

AB A method was described for classifying and identifying, using energy-dispersive x-ray **fluorescence** anal., chem. substances that have x-ray **fluorescence** lines that cannot be detected and which therefore cannot be classified by energy-dispersive x-ray **fluorescence** anal. alone. The method is characterized in that the sample to be analyzed is analyzed in its original packaging or natural state without prior processing in a sample vessel. Using this method, the sample is: (1) positioned in front of the measuring aperture in a sample chamber of an x-ray **fluorescence** app., (2) measured, and (3) classified and identified by application of **multivariate**, statistical techniques to the measurement signals obtained (i.e., to the Compton and Rayleigh scattering).
ST energy dispersive x ray **fluorescence**; Compton scattering energy dispersive x ray **fluorescence**; Rayleigh scattering energy dispersive x ray **fluorescence**; **multivariate** statistics energy dispersive x ray **fluorescence**
IT **Light scattering**
(Rayleigh; **multivariate** statistics for energy-dispersive x-ray **fluorescence** anal. of chem. substances)
IT **X-ray fluorescence spectrometers**
(energy-dispersive; **multivariate** statistics for energy-dispersive x-ray **fluorescence** anal. of chem. substances)
IT X-ray spectroscopy
X-ray spectroscopy
(**fluorescence**, energy-dispersive; **multivariate** statistics for energy-dispersive x-ray **fluorescence** anal. of

chem. substances)
IT Compton effect
Multivariate analysis
(**multivariate** statistics for energy-dispersive x-ray **fluorescence** anal. of chem. substances)
IT Fluorometry
Fluorometry
(x-ray, energy-dispersive; **multivariate** statistics for energy-dispersive x-ray **fluorescence** anal. of chem. substances)
IT 143-33-9, Sodium cyanide 151-50-8, Potassium cyanide 471-34-1, Calcium carbonate, properties 497-19-8, Sodium carbonate, properties 506-87-6, Ammonium carbonate 584-08-7, Potassium carbonate 1309-38-2, **Chromium** oxide (Cr2O3), properties 1309-37-1, Ferric oxide, properties 7439-89-6, Iron, properties 7447-40-7, Potassium chloride, properties 7647-14-5, Sodium chloride, properties 7681-49-4, Sodium fluoride, properties 7757-82-6, Sodium sulfate, properties 7778-50-9, Potassium dichromate 7778-80-5, Potassium sulfate, properties 7782-63-0, Ferrous sulfate heptahydrate 7783-20-2, Ammonium sulfate, properties 7783-85-9, Sulfuric acid, ammonium iron(2+) salt (2:2:1), hexahydrate 7787-56-6, Sulfuric acid, beryllium salt (1:1), tetrahydrate 7788-98-9, Ammonium **chromate** ((NH4)2CrO4) 7789-09-5, Sulfuric acid, **chromium**(3+) potassium salt (2:1:1), dodecahydrate 7789-75-5, Potassium fluoride 7791-18-6, Magnesium chloride, hexahydrate 10025-77-1, Ferric chloride hexahydrate 10034-99-8, Magnesium sulfate heptahydrate 10043-01-3, Aluminum sulfate (2:3) 10043-35-3, Boric acid (H3BO3), properties 10060-12-5, **Chromic** chloride hexahydrate 10101-41-4, Calcium sulfate dihydrate 12125-02-9, Ammonium chloride, properties 13943-58-3, Potassium ferrocyanide 14459-95-1, Potassium ferrocyanide trihydrate
RL: PEP (Properties)
(test substance; **multivariate** statistics for energy-dispersive x-ray **fluorescence** anal. of chem. substances)

L79 ANSWER 15 OF 24 HCAPLUS COPYRIGHT 2002 ACS
AN 2000:161536 HCAPLUS
DN 132:181398
TI Apparatus and method for reagentless analysis of biological samples
IN Jeng, Tzyy-wen; Mc, Dowell Larry L.; Pezzaniti, Joseph L.; Ocsta, Gary M.; Shain, Eric P.
PA Abbott Laboratories, USA
SO PCT Int. Appl., 109 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM **G01N021-27**
ICS **G01N021-41**; **G01N021-05**
CC **9-1** (Biochemical Methods)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000013002	A2	20000309	WO 1999-US19532	19990827 <--
WO 2000013002	A3	20010222		
W: CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6067162	A	20000711	US 1998-141463	19980827 <--
EP 1110079	A2	20010627	EP 1999-942505	19990827 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
US 6365109	B1	20020402	US 1999-407697	19990928 <--
PRAI US 1998-141463	A	19980827 <--		

WO 1999-US19532 W 19990927 <--

AB App. and method are disclosed for detg. at least one parameter, e.g., **concn.**, of at least one analyte, e.g., urea, of a biol. sample, e.g., urine. A biol. sample particularly suitable for the app. and method of this invention is urine. In general, spectroscopic measurements can be used to quantify the **concns.** of one or more analytes in a biol. sample. In order to obtain **concn.** values of certain analytes, such as Hb and bilirubin, visible **light** absorption spectroscopy can be used. In order to obtain **concn.** values of other analytes, such as urea, creatinine, glucose, ketones, and protein, IR **light** absorption spectroscopy can be used. The app. and method of this invention utilize one or more **math.** techniques to improve the accuracy of measurement of parameters of analytes in a biol. sample. The invention also provides an app. and method for measuring the refractive index of a sample of biol. fluid while making spectroscopic measurements substantially simultaneously.

ST app reagentless analysis biol sample; spectrometry biol fluid reagentless analysis; refractive index analysis app biol fluid

IT Absorption spectroscopy
Biological materials
Blood analysis
Body fluid
Cerebrospinal fluid
Electric impedance
Fluorometry
IR spectroscopy
Ions
Light scattering
Mathematical methods
Raman spectroscopy
Refractive index
Saliva
Spectroscopy
Sputum
Sweat
Temperature
Urine analysis
pH
(App. and method for reagentless anal. of biol. samples)

IT Albumins, analysis
Nitrites
RL: ANT (Analyte); ANST (Analytical study)
(App. and method for reagentless anal. of biol. samples)

IT Hemoglobins
Ketones, analysis
Proteins, general, analysis
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(app. and method for reagentless anal. of biol. samples)

IT **Spectrometers**
(cells, sample cell assembly; app. and method for reagentless anal. of biol. samples)

IT Reagents
RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(container for, for materials not having significant spectral signature; app. and method for reagentless anal. of biol. samples)

IT Spectroscopy
(deriv.; app. and method for reagentless anal. of biol. samples)

IT Kidney
(dialyzate of; app. and method for reagentless anal. of biol. samples)

IT **Photometry**
(filter; app. and method for reagentless anal. of biol. samples)

IT **Analytical apparatus**
(for measuring refractive index; app. and method for reagentless anal. of biol. samples)
IT Containers
(for reagent(s) for materials not having significant spectral signature; app. and method for reagentless anal. of biol. samples)
IT Body fluid
(interstitial; app. and method for reagentless anal. of biol. samples)
IT UV and visible spectroscopy
(**light**-scattering; app. and method for reagentless anal. of biol. samples)
IT Noise
(method for redn. of; app. and method for reagentless anal. of biol. samples)
IT 50-99-7, Glucose, analysis 57-13-6, Urea, analysis 61-27-5, Creatinine 645-05-6, Bilirubin, analysis
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(app. and method for reagentless anal. of biol. samples)
IT 7732-18-5, Water, miscellaneous
RL: MSC (Miscellaneous)
(subtraction of absorption spectrum for; app. and method for reagentless anal. of biol. samples)

L79 ANSWER 16 OF 24 HCAPLUS COPYRIGHT 2002 ACS
AN 2000:63132 HCAPLUS
DN 132:131439
TI Nonlinear optical scattering with imaging and fractal analysis for determining the **concentration** of a material in a scattering medium
IN Jungmann, Holger; Schmitzel, Michael
PA MWB G.m.b.H., Germany
SO Ger. Offen., 10 pp.
CODEN: GWXXBX
DT Patent
LA German
IC ICM **G01N021-47**
ICS **G01N021-55; G01N021-17**; G01J003-42
CC 79-3 (Inorganic Analytical Chemistry)
PAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 19831424	A1	20000203	DE 1998-19831424	19980714 <--
DE 19831424	C2	20001228		

AB A spectroscopic procedure for detg. the **concn.** of a material within a scattering medium, consists of the following steps: (1) illumination of the medium with **light** at a continuous **wavelength**, (2) measuring the emitted **light** at a certain direction of the medium, (3) detg. the emission of the emitted **light** as a function of the **wavelength** compared with a std., (4) introducing an absorption-free known scattering medium into the optical path, (5) measuring the **light** emitted at the certain direction of the sample and the scattering medium, (6) detg. the emission of the **light** emitted from the sample and the scattering medium compared with the std., (7) imaging the emissions detd. without and with the scattering mediums, (8) detg. the fractal dimension of the images, and (9) detg. the **concn.** of the substance from the fractal dimension. In this way, previous knowledge of the optical and quant. properties of the scattering medium is not necessary.
ST scattering spectroscopy fractal imaging gas sensor
IT **Fractals**
(fractal dimension; nonlinear optical scattering with imaging and fractal anal. for detg. the **concn.** of a material in a

scattering medium)
IT **Nonlinear optical properties**
Nonlinear optical properties
(**light** scattering; nonlinear optical scattering with imaging and fractal anal. for detg. the **concn.** of a material in a scattering medium)
IT **Gas sensors**
Imaging
Light scattering
(nonlinear optical scattering with imaging and fractal anal. for detg. the **concn.** of a material in a scattering medium)
IT **Light scattering**
Light scattering
(nonlinear; nonlinear optical scattering with imaging and fractal anal. for detg. the **concn.** of a material in a scattering medium)
RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Anon; EP 0810429 A1
(2) Anon; US 5588427

L79 ANSWER 17 OF 24 HCAPLUS COPYRIGHT 2002 ACS
AN 1998:618664 HCAPLUS
DN 129:227807
TI Method and apparatus for measurement of blood substitutes
IN Samsoondar, James
PA Cme Telemetrix Inc., Can.
SO PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM **G01N021-27**
CC 9-5 (Biochemical Methods)
Section cross-reference(s): 6, 13
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9839634	A1	19980911	WO 1997-CA759	19971016 <--
	W: CA, JP, KR, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1013985	A1	20000628	EP 1997-944688	19971016 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2001513892	T2	20010904	JP 1998-538087	19971016 <--
PRAI	US 1997-38554P	P	19970303 <--		
	WO 1997-CA759	W	19971016 <--		

AB A method is disclosed whereby the **concn.** of a blood substitute, such as cross-linked Hb, in a serum or plasma specimen is rapidly and accurately identified and quantified. The method includes making a spectrophotometric measurement of the blood substitute and **calcg** . the **concn.** based on a calibration **algorithm.** The method further takes the measured **concn.** of the blood substitute and uses it to correct for its effect, if any, on a measured analyte **concn.**, e.g., serum/plasma total protein. Further, the method allows for the detn. of the **concn.** of true Hb in the presence of blood substitutes. The method is carried out in respect of samples contained in a primary or secondary labeled tube, or a pipet tip used to dispense serum or plasma in a blood analyzer.
ST blood substitute analysis spectrophotometry
IT Proteins, general, analysis
RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence)
(blood; method and app. for measurement of blood substitutes)

IT Hemoglobins
PL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(crosslinked; method and app. for measurement of blood substitutes)
IT **Algorithm**
Blood
Blood analysis
Blood plasma
Blood serum
Blood substitutes
Hemolysis
Reflection spectroscopy
Spectrophotometry
Turbidity
(method and app. for measurement of blood substitutes)
IT Bile pigments
Proteins, general, analysis
PL: ANT (Analyte); ARU (Analytical role, unclassified); BOC (Biological occurrence); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence)
(method and app. for measurement of blood substitutes)
IT Hemoglobins
PL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence)
(method and app. for measurement of blood substitutes)
IT 9000-97-9, Aspartate aminotransferase 9001-15-4, Creatine kinase 9001-05-9, Lactate dehydrogenase 9001-78-9, Alkaline phosphatase 9046-47-9, .gamma.-Glutamyltransferase
PL: ANT (Analyte); ARU (Analytical role, unclassified); BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(method and app. for measurement of blood substitutes)
IT 57-13-6, Urea, analysis 60-17-5, Creatinine 71-52-3, Bicarbonate, analysis 114-26-0, Biliverdin 635-65-4, Bilirubin, analysis 7439-95-4, Magnesium, analysis 7440-09-7, Potassium, analysis 7440-23-5, Sodium, analysis 7440-70-2, Calcium, analysis 16887-00-6, Chloride, analysis
PL: ANT (Analyte); ARU (Analytical role, unclassified); BOC (Biological occurrence); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence)
(method and app. for measurement of blood substitutes)
IT 197460-97-5, Hemolink
PL: ANT (Analyte); BUU (Biological use, unclassified ; THU (Therapeutic use, ; ANST (Analytical study); BIOL (Biological study); USES (Uses)
(method and app. for measurement of blood substitutes)

L79 ANSWER 14 OF 14 HCAPLUS COPYRIGHT 2002 ACS
AN 1994:217551 HCAPLUS
DN 120:254913
TI Reaction **time** window detn. for rate assays using **turbidimetry** and nephelometry
IN Patzke, Juergen
PA Behringwerke A.-G., Germany
SO Ger. Offen., 28 pp.
CODEN: GWXXBX
DT Patent
LA German
IC ICM **G01N037-00**
ICS **G01N033-557; G01N021-49; G01N021-75; G01N021-82**

CC 9-5 (Biochemical Methods)
Section cross-reference(s): 14, 15
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19640121	A1	19980402	DE 1996-19640121	19960928 <--
	EP 833153	A2	19980401	EP 1997-115223	19970903 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	US 6046180	A	20000404	US 1997-936544	19970924 <--
	CA 2216835	AA	19980328	CA 1997-2216835	19970926 <--
	JP 10111248	A2	19980428	JP 1997-277959	19970926 <--
	US 6317702	B1	20011113	US 2000-503152	20000211 <--
PRAI	DE 1996-19640121	A	19960928 <--		
	US 1997-936544	A1	19970924 <--		

AB The invention concerns a method to det. the **time** window for measuring quantities that change rate during the progress of the reaction. The max. quantity L(t) is detd. in the linear region; values detd. in a first expt. are used in a second detn. to derive the **time** window. Also polynoms that fit the L(t) function can be used to **calc.** the **time** window. The method is used in **turbidimetry**, nephelometry and **light** scattering measurements for antibody-antigen reactions, plasma proteins and blood clotting.

ST reaction **time** window **turbidimetry** nephelometry; clotting immunoassay protein **time** window

IT Immunoglobulins
PL: ANT (Analyte); ANST (Analytical study)
(A; reaction **time** window detn. for rate assays using **turbidimetry** and nephelometry)

IT Fibrinogen, degradation products
PL: ANT (Analyte); ANST (Analytical study)
(D; reaction **time** window detn. for rate assays using **turbidimetry** and nephelometry)

IT Proteins, general, analysis
PL: ANT (Analyte); ANST (Analytical study)
(blood; reaction **time** window detn. for rate assays using **turbidimetry** and nephelometry)

IT Analysis
(clin.; reaction **time** window detn. for rate assays using **turbidimetry** and nephelometry)

IT **Algorithm**
Blood coagulation
Immunoassay
Latex
Nephelometry
Turbidimetry
(reaction **time** window detn. for rate assays using **turbidimetry** and nephelometry)

IT Proteins
Prostate-specific antigen
PL: ANT (Analyte); ANST (Analytical study)
(reaction **time** window detn. for rate assays using **turbidimetry** and nephelometry)

L79 ANSWER 19 OF 34 HCAPLUS COPYRIGHT 2002 ACS
AN 1997:446679 HCAPLUS
DN 127:96956
TI Reagent system and method for the differentiation and identification of reticulocytes
IN Prudhome, Robert M.; Marshall, Paul N.; Embleton, Anne M.; Glazier, John G.; Van Hove, Luc
PA Abbott Laboratories, USA

SO PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM **G01N033-80**
CC 9-4 (Biochemical Methods)
Section cross-reference(s): 13
PAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9719336	A1	19970529	WO 1996-US18471	19961113 <--
	W: CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5733784	A	19980331	US 1995-560601	19951120 <--
	CA 2237473	AA	19970529	CA 1996-2237473	19961113 <--
	EP 864081	A1	19980916	EP 1996-942767	19961113 <--
	R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL				
	JP 11500530	T2	20000118	JP 1997-519822	19961113 <--
PRAI	US 1995-560601		19951120 <--		
	WO 1996-US18471		19961113 <--		

AB Whole blood is mixed with a reticulocyte reagent system that has a reticulocyte staining reagent and a diluent reagent, used in combination. This mixt. is incubated at room temp. for between about 15 min to about 4 h. The incubated mixt. is then analyzed and the **light** scattering properties of the cells are detected, collected, differentiated, and quantitated. Data gathering includes, at least, 10.degree. and 90.degree. **light**-scatter detection.

ST blood reticulocyte differentiation identification stain reagent; **light** scattering reticulocyte differentiation identification

IT **Algorithm**
Light scattering
Reticulocyte
Staining, biological
Stains, biological
(reagent system and method for reticulocyte differentiation and identification)

IT 531-55-6, Azure B 1934-16-3, New Methylene Blue 67586-77-8, Oxazine 750 88049-24-6, Brilliant Cresyl Blue
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(reagent system and method for reticulocyte differentiation and identification)

IT 62-76-0, Sodium oxalate 139-33-3, Disodium EDTA 1113-38-8, Ammonium oxalate 7447-40-7, Potassium chloride, analysis 7558-79-4, Dibasic sodium phosphate 7647-14-5, Sodium chloride (NaCl), analysis 7778-77-0, Monobasic potassium phosphate 10043-52-4, Potassium oxalate 14933-09-6, N-Tetradecyl-N,N-dimethyl-3-ammonio-1-propanesulfonate 58396-85-5, Brocilin 300 69227-93-6, Dodecyl-.beta.-D-maltoside 54205-19-4, N-Dodecyl-N,N-dimethyl-3-ammonio-1-propanesulfonate
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(reagent system and method for reticulocyte differentiation and identification)

L79 ANSWER 20 OF 24 HCAPLUS COPYRIGHT 2002 ACS
AN 1995:956093 HCAPLUS
DN 123:358026
TI Determination of particle **concentration** in suspension and apparatus thereof
IN Yamadoe, Seiro
PA Cosmo Sogo Kenkyusho KK, Japan; Cosmo Oil Co Ltd
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese

IC ICM **G01N021-49**
ICS **G01N015-06**
CC 74-6 (Inorganic Analytical Chemistry)
Section cross-reference(s): 75
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07198605	A2	19950801	JP 1993-340459	19931228 <--
	JP 2928879	B2	19981105		

AB The title method, suited for use in **colored** suspension, comprises measuring scattered and transmitted **light** from the suspension.
ST suspension particle **concn turbidimeter** **turbidimetry algorithm**
IT **Algorithm**
Suspensions
Turbidimeters
Turbidimetry
(detn. of particle **concn.** in suspension and app. thereof)

L79 ANSWER 21 OF 24 HCAPLUS COPYRIGHT 2002 ACS
AN 1994:404517 HCAPLUS
DN 121:4517
TI Method for determination of test reagent **concentration** to avoid prozone phenomenon in **turbidimetric** immunoassay
IN Nakano, Kyokazu
PA Chimadzu Corp, Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM **G01N035-00**
ICS **G01N033-536; G01N033-543**
CC 9-19 (Biochemical Methods)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06109740	A2	19940422	JP 1992-283947	19920930 <--
	JP 3102166	B2	20001023		

AB The title method comprises (1) reacting test reagent with stds., (2) measuring the reactions at a 1st **time** point and a 2nd **time** point, (3) analyzing the data by linear regression, and (4) extrapolating and detg. the non-prozone phenomenon **concn.** region of the test reagent. The invention is a rapid method for detg. proper test reagent **concn.** to avoid prozone phenomenon and to cut the cost. The method is also appropriate for **automatic** **turbidimetric** immunoassay for antigen or antibody detn.
ST **turbidimetric** immunoassay prozone phenomenon prevention; linear regression test reagent **concn**
IT Antibodies
RL: ANT (Analyte); ANST (Analytical study)
(detn. of, prevention of prozone phenomenon by two reaction **time** points measurement and linear regression anal. for detg. test reagent **concn.** in **turbidimetric** immunoassay for)
IT Antigens
RL: ANT (Analyte); ANST (Analytical study)
(detn. of, prevention of prozone phenomenon by two reaction **time** points measurement and linear regression for detg. test reagent **concn.** in **turbidimetric** immunoassay for)
IT **Mathematics**
(**equations**, for linear regression anal., two reaction **time** points measurement and, for detg. test reagent

concn. for **turbidimetric** immunoassay)
IT Serological reaction
(prozone, prevention of, two reaction **time** points measurement and linear regression for detg. test reagent **concn.** for, for **turbidimetric** immunoassay)
IT **Statistics and Statistical analysis**
(**regression**, two reaction **time** points measurement and, for detn. of test reagent **concn.** for **turbidimetric** immunoassay)
IT Immunoassay
(**turbidimetric**, prevention of prozone phenomenon in, two reaction **time** points measurement and linear regression for detg. test reagent **concn.** for)
IT Immunoassay
(**turbidimetric**, **automated**, prevention of prozone phenomenon in, two reaction **time** points measurement and linear regression for detg. test reagent **concn.** for)

L79 ANSWER 22 OF 24 HCAPLUS COPYRIGHT 2002 ACS
AN 1994:184778 HCAPLUS
DN 120:184778
TI **Mathematical** model of toxicity monitoring sensors incorporating microbial whole cells
AU Haggett, Barry G. D.
CS Res. Cent., Univ. Luton, Luton/Bedfordshire, LU1 3LF, UK
SO Analyst (Cambridge, U. K.) (**1994**), 119(2), 197-201
CODEN: ANALAO; ISSN: 0003-2654
DT Journal
LA English
CC **4-1** (Toxicology)
AB A model is presented that describes aspects of the transient and steady-state behavior of toxicity monitoring biosensors that incorporate living microbial cells immobilized in a thin layer between an amperometric electrode and a porous (nontortuous) membrane. In the example considered here, respiratory or photosynthetic electron-transport activity is monitored by using artificial **redox** mediators to divert electrons from the electron-transport systems to the working electrode poised at a suitable reducing potential. Such biosensors are being developed for a range of environmental monitoring applications. The **math.** model is used to demonstrate how the response of practical devices can be manipulated and to indicate potential pitfalls in the interpretation of toxicity assessment data derived by such biosensors.
ST **math** model toxicity analysis biosensor microbe
IT Simulation and Modeling, biological
(**math.**, of toxicity monitoring microbial biosensors)
IT Toxicity
(monitoring of, by microbial biosensors, **math.** model of)
IT **Biosensors**
(microbial, amperometric, toxicity monitoring by, **math.** model of)

L79 ANSWER 23 OF 24 HCAPLUS COPYRIGHT 2002 ACS
AN 1994:101249 HCAPLUS
DN 120:101249
TI Process for the analytical determination of the **concentration** of a component of a medical specimen
IN Schaefer, Rainer; Berding, Christoph; Lang, Fridl; Kleider, Wilhelm; Wolf, Peter
PA Boehringer Mannheim G.m.b.H., Germany
SO Eur. Pat. Appl., 15 pp.
CODEN: EPXXDW
DT Patent
LA German

IC ICM **G01N033-53**
ICS **G01N021-47; G01N021-27**
CC 9-16 (Biochemical Methods)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 576873	A	19940105	EP 1993-109183	19930608 <--
	EP 576873	A3	19940518		
	EP 576873	B1	19981021		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
	DE 4221807	A1	19940106	DE 1992-4221807	19920703 <--
	DE 4221807	C2	19940714		
	AT 172538	E	19981115	AT 1993-109183	19930608 <--
	ES 2122591	T3	19981216	ES 1993-109183	19930608 <--
	US 5420042	A	19950530	US 1993-84009	19930629 <--
	JP 06167501	A	19940614	JP 1993-164842	19930702 <--
PRAI	DE 1992-4221807		19920703	<--	

AB Reaction of a medical sample with reagents produces a **time** (t)-dependent change in a measurable parameter S, where the **concn**. C of a component of interest in the sample is correlated to an input variable X derived from S(t) and the calibration curve X = f-1(C) is not monotonic, so that a value of X may correspond to >1 value of C. A discrimination **algorithm** is provided for correlating X with a unique value of C using **multivariate** statistics. The reaction may be a specific binding reaction, e.g. immunopptn., where S is **turbidity**. The method was applied to immunol. detn. of albumin in urine with a com. kit by **turbidimetry**.

ST **turbidity** immunoassay **multivariate** statistics; albumin urine immunoassay **turbidity**

IT Urine analysis
(albumin detn. in, by **turbidimetric** immunoassay, **multivariate** statistics in relation to)

IT **Turbidimetry**
(clin., specific binding assay using, **multivariate** statistics in)

IT Ferritins
RL: ANT (Analyte); ANST (Analytical study)
(detn. of, in blood serum by latex-enhanced **turbidimetric** immunoassay, **multivariate** statistics in relation to)

IT Albumins, analysis
RL: ANT (Analyte); ANST (Analytical study)
(detn. of, in urine by **turbidimetric** immunoassay, **multivariate** statistics in relation to)

IT Blood analysis
(ferritin detn. in, by latex-enhanced **turbidimetric** immunoassay, **multivariate** statistics in relation to)

IT Antibodies
RL: ANST (Analytical study)
(immobilized, for clin. immunopptn. assay, **multivariate** statistics in relation to)

IT Receptors
RL: RCT (Reactant)
(reaction of, with ligands in **turbidimetric** clin. anal., **multivariate** statistics in relation to)

IT Ligands
RL: RCT (Reactant)
(reaction of, with receptors in **turbidimetric** clin. anal., **multivariate** statistics in relation to)

IT **Statistics and Statistical analysis**
(**discriminant**, in **turbidimetric** specific binding assay, in clin. anal.)

IT Immunoassay
(immunopptn., immobilized antibody for, in clin. anal.,

multivariate statistics in relation to)
IT **Statistics and Statistical analysis**
(**multivariate**, in **turbidimetric** specific binding assay, in clin. anal.)

L79 ANSWER 4 OF 24 HCAPLUS COPYRIGHT 2002 ACS
AN 1983:611021 HCAPLUS
DN 99:211021
TI Analysis of Ig
PA Shimadzu Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC **G01N033-54**
CC 15-1 (Immunochemistry)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 58113755	A2	19830706	JP 1981-211393	19811226 <--

AB The detn. of Igs in blood serum using **immunoturbidimetry** is improved by using sample blank channels in addn. to conventionally used anal. channels for the measurement of the **turbidity** absorption at 340 nm. The parameters for the measurement are defined, and **math.** formula for the **calcn.** of Ig **concns.** are presented. Accurate Ig **concns.** were detd. even in the presence of 62.5-250 mg Hb/dL or 2.5-10.0 mg bilirubin/dL in blood serum.
ST Ig detn **immunoturbidimetry**
IT Blood analysis
(Ig detn. in human, by **immunoturbidimetry**)
IT Immunoglobulins
RL: ANT (Analyte); ANST (Analytical study)
(detn. of, of blood of human, by **immunoturbidimetry**)
IT Immunochemical analysis
(**immunoturbidimetry**, of Ig of human)

=> d l85 all tot

L85 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2002 ACS
AN 2002:129572 HCAPLUS
DN 136:139897
TI Device for monitoring liquid biological medium
IN Vasilevskii, A. M.; Kornilov, N. V.
PA Russia
SO Russ., 30 pp. given
CODEN: RUXXE7
DT Patent
LA Russian
IC ICM **G01N021-31**
CC 64-7 (Pharmaceuticals)
Section cross-reference(s): 9
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI RU 2161791	C2	20010110	RU 1998-123692	19981230 <--

AB Monitoring of liq. biol. medium, e.g., components of dialysis liqs. in hemodialysis is based on the formation of **light** beam of a continuous spectrum source in a controlled zone of liq. biol. medium. Change of characteristics in this section is detd. and spectral coeffs. of correlation of absorption dynamics per each analyzed component are **computed**. Later, luminous flux is transmitted through a disp with liq. biol. medium, radiation passed in spectrum is decompd. and

transmission coeff. of liq. medium is measured. Finally **concn.** of analyzed components is **computed** by spectral coeffs. of correlation of absorption dynamics. The proposed device has a **light** source, optical system forming **light** beam, a dish with biol. liq. medium flowing through it, a spectrometer and controller installed in series, controlling **computer**, unit controlling parameters of recording and tuning of spectrometer, a processor of the spectra, unit controlling monitoring parameters, timer, input data, processing, output data and display units, and unit of **algorithms**. Controlling **computer** is connected to controller on one side and to unit controlling parameters of recording and tuning of spectrometer and input data unit on the other side. The latter is connected in its turn to unit controlling monitoring parameters. First output of controlling **computer** is connected to the input of processor of present spectrum whose output is linked to display. Second output of controlling **computer** is connected to timer, processing unit and unit of **algorithms** connected in series. The unit of **algorithms** is connected to display and output data unit. The output of processor of present spectrum is connected to the input of timer.

ST liq biol medium device

IT **Algorithm**
Computer application
Light
(device for monitoring liq. biol. medium)

IT Dialysis
(hemodialysis; device for monitoring liq. biol. medium)

L25 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:469722 HCAPLUS
DN 135:78956
TI Method and apparatus for controlling the manufacturing quality of a moving web
IN Workman, Jerome J., Jr.
PA Kimberly-Clark Worldwide, Inc., USA
SO PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM **G01N021-86**
ICS **G01N021-31**; D21G023-00
CC 48-10 (Unit Operations and Processes)
Section cross-reference(s): 74
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001004602	A1	20010118	WO 2000-US18630	20000220 <--

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DO, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 1999-474713 A 19991229 <--
AB A method and app. are disclosed for detecting the compn. of a moving web product on a real-**time** basis during the manufg. process. Spectrometric monitoring equipment operates to derive information regarding phys. and/or chem. properties of the web at **multiple** locations in the web's cross direction. Data from a **plurality** of spectral regions can be combined to produce a vector contg. accurate

information regarding the web's compn. This information is derived using **multivariate math.** techniques to yield a spatial data matrix for each component of interest. Compn. information contained in the spatial data matrix can be reprojected as a "virtual compn. map," or compared against ideal profiles stored in a **computer** memory.
ST controlling manufg quality moving web; app controlling manufg quality moving web
IT Apparatus
Optical detectors
Quality control
(method and app. for controlling manufg. quality of moving web)
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Abx Ind Systems Inc; EP 0681163 A 1995
(2) Qualico Gmbh; DE 19708963 A 1998
(3) Siemens Ag; DE 19653477 A 1998 HCAPLUS
(4) Siemens Ag; DE 19830823 A 1999

L#5 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:168239 HCAPLUS
DN 134:204739
TI Method for determination of tissue analytes using NIR, adjacent visible spectrum and discrete NIR **wavelengths**
IN Specina, Thomas G.; Pawluczyk, Romuald; Cadell, Theodore E.
PA CME Telemetrix Inc., Can.
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM **G01N021-35**
ICS **G01N021-31**; A61B005-00
CC 9-5 Biochemical Methods
PAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001016577	A1	20010308	WO 2000-CA1000	20000831 <--
W: CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1114977	A1	20010718	EP 2001-965984	20000831 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
PRAI US 1999-151537P	P	19990831 <--		
WO 2000-CA1000	W	20000831		

AB Described is a method for measuring the **concn.** of a blood constituent within a body part (80) of a living subject which comprises irradiating a body part of the subject with a continuum of a broad spectrum of radiation in adjacent and near IR range of the electromagnetic spectrum; collecting the band of radiation after the radiation has been directed onto the part; dispersing the continuum of collected radiation into a dispersed spectrum of component **wavelengths** onto a detector (120), the detector taking measurements of at least one of transmitted or reflected radiation from the collected radiation; and transferring the measurements to a processor (300), and then measuring the same kind of absorbance or reflectance with respect to one or more discrete **wavelengths** of radiation from the longer near IR range and using the measurements to **calc.** the **concn.** of the constituent.
ST tissue analyte NIR adjacent visible spectrum spectroscopy
IT Hand
(finger; tissue analytes detn. using NIR and adjacent visible spectrum and discrete NIR **wavelengths**)
IT IR spectroscopy

Optical detectors
(near-IR; tissue analytes detn. using NIR and adjacent visible spectrum and discrete NIR **wavelengths**)
IT Blood analysis
(noninvasive; tissue analytes detn. using NIR and adjacent visible spectrum and discrete NIR **wavelengths**)
IT **Algorithm**
Animal tissue
Body, anatomical
Computers
Optical detectors
Spectrometers
Spectroscopy
(tissue analytes detn. using NIR and adjacent visible spectrum and discrete NIR **wavelengths**)
IT 50-99-7, D-Glucose, analysis
RL: ANT (Analyte); ANST (Analytical study)
(tissue analytes detn. using NIR and adjacent visible spectrum and discrete NIR **wavelengths**)
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Domjan, G; WO 9637759 A 1996
(2) Guthermann, H; DE 5816048 A 1998 HCAPLUS
(3) Khalil, G; US 5747806 A 1998 HCAPLUS
(4) Lepper, J; US 5743262 A 1998

L65 ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:611438 HCAPLUS
DN 132:47232
TI A method in quality control of a spectrophotometer
IN Hansen, Heine
PA Radiometer Medical A/S, Den.
SO PCT Int. Appl., 62 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM **G01N021-31**
ICS **G01N033-49**; G01J003-42
CC 9-5 (Biochemical Methods)
Section cross-reference(s): 73
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9946610	A1	19990916	WO 1999-DK313	19990610 <--
	W: JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1062496	A1	20001228	EP 1999-924801	19990610 <--
	R: AT, CH, DE, DK, FR, GB, IT, LI				
	JP 2002506670	T2	20020305	JP 2000-535079	19990610 <--
PRAI	DK 1998-783	A	19980612 <--		
	WO 1999-DK313	W	19990610 <--		

AB Methods for calibration of spectrophotometers, esp. oximeters for blood anal., are described which entail using the spectrophotometer to det. a spectrum Am(.lambda.) of a fluid ref. sample contg. a dye, and detg. a **wavelength** shift .DELTA..lambda. from C.DELTA..lambda.(.lambda.)Am(.lambda.), where C.DELTA..lambda.(.lambda.) is a predetd. coeff. vector previously stored in a memory of the spectrophotometer. Vectors for interferences (e.g., fetal Hb) may also be stored and used to produce **calcd.** spectra for which the effects of the interference are minimized. Spectrophotometers provided with memory with a **math.** parameter for the detn. of a **wavelength** shift of the spectrophotometer, and a processor that is

connected to the memory and that is adapted to **calc.** the **wavelength** shift AX from the **math.** parameter and from a spectrum detd. with the spectrophotometer on a dye-contg. ref. sample are also described. Alternately, a lamp with a known emission spectrum may be used in place of a ref. sample. Spectrophotometers may be prepd. for calibration by detg. a first ref. spectrum of a ref. sample contg. a dye in a first **concn.** with a ref. spectrophotometer, detg. a first deriv. of the first ref. spectrum, and detg. from at least the first ref. spectrum and the first deriv. a **math.** parameter from which a **wavelength** shift of the spectrophotometer can be detd., and storing the **math.** parameter in a memory of the spectrophotometer.

ST spectrophotometer calibration; oximeter calibration

IT Calibration
Spectrometers
(calibration of spectrophotometers and spectrophotometers equiped for the calibration)

IT **Analytical apparatus**
Analytical apparatus
Medical equipment
Medical equipment
(oximeters; calibration of spectrophotometers and spectrophotometers equiped for the calibration

IT 3520-42-1, Sulforhodamine B
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(calibration of spectrophotometers and spectrophotometers equiped for the calibration)

IT 9034-63-5, Fetal hemoglobin
RL: ARU (Analytical role, unclassified); OCU (Occurrence, unclassified); ANST (Analytical study); OCCU (Occurrence)
(calibration of spectrophotometers and spectrophotometers equiped for the calibration)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
(1) Abbott Laboratories; EP 0167816 A2 1986
(2) Ashland Oil, Inc; WO 9403729 A1 1994 HCAPLUS
(3) Atsumi, I; US 5591291 A 1997 HCAPLUS
(4) Ciba Corning Diagnostics Corp; WO 9630742 A1 1996 HCAPLUS

L85 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:307867 HCAPLUS
DN 130:309767
TI Three **wavelength** in-vivo analyte detector
IN Dobson, Peter J.; Turner, Scott J.
PA Abbott Laboratories, USA
SO Brit. UK Pat. Appl., 18 pp.
CODEN: BAXXDU
DT Patent
LA English
IC ICM **G01N021-31**
ICA A61B005-00; G01N021-35
CC 9-1 (Biochemical Methods)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 2328279	A1	19990217	GB 1997-17134	19970812 <--
	JP 2001513351	T2	20010904	JP 2000-506877	19980805 <--
PRAI	GB 1997-17134	A	19970812 <--		
	WO 1998-GB2353	W	19980805 <--		

AB A device for measuring the **concn.** of an analyte in blood in vivo is disclosed. The device comprises (1) a transmitter for illuminating a body part with **light** at a **plurality** of predetd. **wavelengths;** (2) a detector for receiving **light** from the

body part and generating input signals representative of the intensity of received **light** at each of the **wavelengths**; and (3) a **computer** coupled to the detector for generating an output signal representative of the **conc.** of analyte in the blood in the body part by anal. of input signals received from the detector. The transmitted or reflected intensity of **light** at three discrete **wavelengths** is analyzed by **computer**. The analyte is esp. glucose and the body part is a finger. A formula is given for **calcg.** the output signal from **light** received at three discrete **wavelengths**.

ST in vivo analyte detector; blood glucose in vivo **light** detector

IT Hand
(finger, blood glucose detn. in; three **wavelength** in-vivo analyte detector)

IT **Mathematical methods**
(for **calcg.** output signal from **light** received at three discrete **wavelengths**; three **wavelength** in-vivo analyte detector)

IT **Analytical apparatus**
Blood analysis
Body, anatomical
Computers
Optical fibers
Photodiodes
Sensors
(three **wavelength** in-vivo analyte detector)

IT 50-99-7, Glucose, analysis
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(as analyte; three **wavelength** in-vivo analyte detector)

IT 50-99-7, D-Glucose, biological studies
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(blood; detn. of; three **wavelength** in-vivo analyte detector)

L85 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:267367 HCAPLUS
DN 130:264412
TI Infrared **multi-wavelength** non-invasive measurement of blood component **concentrations**
IN Ameen, Ainat K.; Jeon, Kye-Jin; Kim, Yeon-Joo; Yoon, Gil-Won
PA Samsung Electronics Co. Limited, S. Korea
SO Brit. UK Pat. Appl., 27 pp.
CODEN: BAXXDU
DT Patent
LA English
IC ICM A61B005-00
ICS **G01N021-31**; **G01N021-35**
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 1

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 2330015	A1	19990310	GB 1998-18619	19980821 <--
	GB 2330015	B2	20020515		
	FR 2768043	A1	19990312	FR 1998-11105	19980904 <--
	FR 2768043	B1	20000811		
PRAI	KR 1997-45479	A	19970905 <--		
	KR 1998-21969	A	19980612 <--		

AB A method and device for noninvasive measurement of blood component **concns.** utilizes pulsed polychromatic **light** source emitting in particular **light** in the near IR range 810-1850 nm. The **light** is back scattered from or transmitted through a part

of a patient's body. Back scattered **light** from blood-contg. tissues and blood vessels has information on blood component **concns.** That **light** is properly collected to avoid the surface reflection from the skin surface and provide minimization of the effects of changes in the scattering background. The **concns.** of blood components is **calcd.** from the spectral anal. based on selected **wavelengths** by a proposed **algorithm.** A microprocessor **calcs.** a ratio and dets. the blood component **concns.** by comparing the ratio with a calibration curve stored in a memory of the microprocessor. The **calcd. concn.** values can be used for clin. use or for a home test.

ST IR **multi wavelength** noninvasive blood component

IT **Algorithm**
Blood analysis
Blood vessel
IR spectrometers
Light sources
Optical detectors
Pharmaceutical analysis
Skin
(IR **multi-wavelength** non-invasive measurement of blood component **concns.**)

IT Albumins, analysis
Hemoglobins
RL: ANT (Analyte); ANST (Analytical study)
(IR **multi-wavelength** non-invasive measurement of blood component **concns.**)

IT Electric circuits
(analog-digital converters; IR **multi-wavelength** non-invasive measurement of blood component **concns.**)

IT **Computers**
(microprocessors; IR **multi-wavelength** non-invasive measurement of blood component **concns.**)

IT IR spectroscopy
(near-IR; IR **multi-wavelength** non-invasive measurement of blood component **concns.**)

IT 50-99-7, Glucose, analysis 57-88-5, Cholesterol, analysis 64-17-5, Ethanol, analysis
RL: ANT (Analyte); ANST (Analytical study)
(IR **multi-wavelength** non-invasive measurement of blood component **concns.**)

L35 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2002 ACS
AN 1998:690989 HCAPLUS
DN 129:197568
TI Spectrophotometric analysis for hemoglobin analysis in blood
IN Jarman, Royer Kristin; Pologe, Jonas A.
PA Ohmeda Inc., USA
SO Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM **G01N021-31**
ICS A61B005-026; **G01N033-487**
CC 9-5 (Biochemical Methods)
Section cross-reference(s): 6, 13
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 871026	A2	19981014	EP 1998-302120	19980320 <--
EP 871026	A3	19990113		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

JP 10318915 A2 19981204 JP 1998-92431 19980406 <--
PRAI US 1997-835289 19970409 <--
AB A two-stage statistical calibration and measurement method and system is disclosed for performing photoplethysmog. measurement of blood analyte **concns.** **Concns.** in a tissue sample of MetHb, O2Hb, Hb and COHb are estd. by first estg. a **concn.** of MetHb (in a first stage) and subsequently, if the **concn.** of MetHb is within a predetd. range, then the estd. **concn.** of MetHb is assumed to be accurate and this estd. **concn.** of MetHb is utilized as a "known value" in detg. the **concns.** of the remaining analytes O2Hb, Hb and COHb (in a second stage). By eliminating one "unknown" from the system of **equations**, these remaining analytes can be **calcd.** with increased accuracy. Each stage is performed using data obtained by transmitting **light** through the tissue sample (typically a finger or earlobe). The transmitted **light** is generated by four discrete **light** emitters, each emitter having a distinct spectral content.
ST blood Hb analysis photoplethysmog spectrophotometry
IT Hemoglobins
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(carboxyhemoglobins; spectrophotometric anal. for Hb anal. in blood)
IT Apparatus
(photoplethysmog. analyzer; spectrophotometric anal. for Hb anal. in blood)
IT **Algorithm**
Animal tissue
Blood
Blood analysis
Mathematical methods
Spectrometers
Spectrophotometry
(spectrophotometric anal. for Hb anal. in blood)
IT Hemoglobins
Hemoglobins, methemoglobins
Hemoglobins, oxyhemoglobins
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(spectrophotometric anal. for Hb anal. in blood)

L65 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2002 ACS
AN 1997:251814 HCAPLUS
DN 126:25573
TI Method of quantitatively determining one or more characteristics of a substance
IN Evans, Peter Dilwyn; Barnett, Nicholas
PA Johnson & Johnson Medical, Inc., USA
SO Eur. Pat. Appl., 15 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM **G01N021-31**
ICS **G01N021-47**; A61B005-00
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 13, 73
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 760476	A1	19970305	EP 1996-306179	19960823 <--
EP 760476	B1	19990804		
R: DE, FR, GB, SE				
PRAI GB 1995-17366		19950824 <--		

AB A method is described for quant. detg. .gtoreq.1 characteristic of a

substance by near-IR spectroscopy, wherein the characteristic is, e.g., the Hb or cytochrome **concn.** of a tissue of the human or animal body. The method involves: irradiating a point of the substance with radiation at .gtoreq.2 distinct **wavelengths**, measuring the intensity of the radiation detected at 2 locations, detg. the optical path lengths of the radiation between the irradn. point and the 2 detecting locations, and detg. the effect of the divergence of the radiation reaching the 2 locations. The relative coupling efficiencies of the 2 detectors are detd. by the use of a 2nd emission point equidistant from the 2 detectors. The characteristic being measured is then detd. by the intensity of the radiation detected at the detecting locations with the result modified by accounting for the optical path lengths to the detecting locations, the detector coupling efficiencies, and the effect of divergence of the radiation before reaching the detecting locations. An example shows a dual-channel sensor placed on the surface of the human head for use in analyzing the cerebral cortex, but the invention also can be used to monitor noninvasively tissue Hb **concn.** in other parts of the body and may be useful in fields such as plastic surgery and vascular surgery.

ST body tissue analysis near IR spectroscopy; Hb detn cerebral cortex IR detector

IT Brain
(cerebral cortex; quant. anal. of body tissues by near-IR spectroscopy)

IT IR spectroscopy
Optical detectors
(near-IR; quant. anal. of body tissues by near-IR spectroscopy)

IT Surgery
(plastic; quant. anal. of body tissues by near-IR spectroscopy)

IT Animal tissue
Body, anatomical
Electroluminescent devices
Mathematical methods
(quant. anal. of body tissues by near-IR spectroscopy)

IT Cytochromes
Hemoglobins
RL: ANT (Analyte); ANST (Analytical study)
(quant. anal. of body tissues by near-IR spectroscopy)

IT Blood vessel
Blood vessel
(surgery; quant. anal. of body tissues by near-IR spectroscopy)

IT Surgery
Surgery
(vascular; quant. anal. of body tissues by near-IR spectroscopy)

IT 7732-18-5, Water, processes
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(quant. anal. of body tissues by near-IR spectroscopy)

L35 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2002 ACS
AN 1992:422863 HCAPLUS
DN 117:22863
TI Photometer-based apparatus for noninvasive determination of total hemoglobins in blood
IN Hamaguri, Kenji
PA Minolta Camera K. K., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM A61B005-14
ICS **G01N021-31**
CC 9-1 (Biochemical Methods)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04040940	A2	19920212	JP 1990-149527	19900607 <--

AB The title app. consists of a device to irradiate a test subject with **light** having .gtoreq.2 different **wavelengths** that show different absorbance coeffs. for Hbs and water, a **light** receiver for the permeated or reflected **lights** with different **wavelengths**, and a device for **calcg.** total Hbs. in a blood sample based on the ratio of the pulsating components of the outputs corresponding to the various **wavelengths**. The total Hb contents can be **calcd.** using the **equation**: total Hb **concn.** = a R2 + b [a, b = integral no; R = the ratio of the pulsating components]. The method is noninvasive. Diagrammatic views of the app. are presented.

ST app photometer noninvasive Hb detn; **math equation** total Hb detn

IT Hemoglobins
RL: ANST (Analytical study)
(detn. of total, noninvasive, photometer-based app. for)

IT **Photometers**
(in app. for noninvasive total Hb detn. in blood)

IT Blood analysis
(total Hb detn. in, noninvasive, photometer-based app. for)

IT **Mathematics**
(**equations**, for total Hb detn. with photometer-based app.)

L85 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2002 ACS
AN 1992:160643 HCAPLUS
DN 116:160643
TI Determination of hemoglobin oxygen saturation in erythrocytes for circulation dynamic monitoring
IN Ishikawa, Muneharu; Yamamoto, Tetsuya; Kanebako, Makoto
PA Kowa K. K., Japan
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM A61B005-14
ICS **G01N021-31**
CC 9-6 (Biochemical Methods)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04012946	A2	19920120	JP 1990-116692	19900510 <--

AB The title method involves: irradn. of test subjects with **multiple** interfering **light** having different **wavelengths**, eliminating the scattered **light** having frequency components equiv. to the blood flow, and detg. and comparing other frequency components to det. the Hb satn. in erythrocytes for monitoring of the blood circulation dynamics. The method is accurate. **Equations** for the **calcn.** are presented.

ST Hb oxygen satn erythrocyte circulation dynamic; spectrometry Hb oxygen blood circulation

IT Circulation
(dynamics, spectrometric detn. of oxygen satn. in erythrocyte for)

IT Hemoglobins
RL: ANST (Analytical study)
(satn. of, in erythrocyte, spectrometric detn. of, for monitoring circulation dynamics)

IT **Mathematics**
(**equations**, for erythrocyte Hb satn. detn. for monitoring circulation dynamics)

IT 7782-44-7, Oxygen, analysis
RL: ANST (Analytical study)

(erythrocyte Hb satn with, detn. of, for monitoring circulation dynamics)

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FILE 'WPIX' ENTERED AT 08:01:46 ON 03 JUL 2002
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enabled in WPINDEX/WPIDC and WPIX <<<

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GUIDES, PLEASE VISIT:
http://www.derwent.com/userguides/dwpi_guide.html <<<

=> d all abeq tech tot 1110

L110 ANSWER 1 OF 20 WPIX (C) 2002 THOMSON DERWENT
AN 2002-077015 [11] WPIX
DNN N2002-056843 DNC C2002-021501
TI Analysis of samples, especially for minimum inhibitory concentration determination, comprises mathematically combining spectral data to provide at least two growth indicator values.
DC B04 S03
IN **CLYDE, M; OCONNELL, M A; PARMIGIANI, G; TURNER, D J; WILES, T M; O'CONNELL, M A**
PA (BECT) **BECTON DICKINSON & CO**
CYC 25
PI EP 1160564 A2 20011205 (200211)* EN 32p G01N021-31 <--
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT SE SI TR
CA 2349043 A1 20011129 (200211) EN C12Q001-02
JP 2002214569 A 20020731 (200234) 71p C12Q001-18
ADT EP 1160564 A2 EP 2001-111418 20010510; CA 2349043 A1 CA 2001-2349043 20010528; JP 2002214569 A JP 2001-160205 20010529
PRAI US 2000-583891 20000531
IC ICM C12Q001-02; C12Q001-18; G01N021-31
ICS C12M001-34; G01N021-25; G01N021-64; G01N021-78; G01N033-15; G01N033-48; G01N033-483; G06F019-00
AB EP 1160564 A UPAB: 20020215
NOVELTY - Method (A) for analyzing a sample comprises:
(a) directing different analyzing light wavelengths onto the sample in a sample well;
(b) detecting a resultant light wavelength emanating from the sample for each analyzing light wavelength;
(c) generating a result value representative of each resultant light wavelength; and

(d) mathematically combining the result values to provide growth indicator values.

DETAILED DESCRIPTION - Method (A) for analyzing a sample comprises:

(a) directing different analyzing light wavelengths onto the sample in a sample well;

(b) detecting a resultant light wavelength emanating from the sample for each analyzing light wavelength;

(c) generating a result value representative of each resultant light wavelength; and

(d) mathematically combining the result values to provide at least two growth indicator values, each representing a growth characteristic of the sample.

INDEPENDENT CLAIMS are also included for the following:

(1) a method (B) for determining a minimum inhibitory concentration (MIC) value for a sample in a container having several wells, each containing a portion of the sample and a growth-affecting material, which comprises taking a set of readings for each well at a series of time intervals to provide a set of values for each well at each time interval, mathematically combining the sets of values for each well to provide a characteristic value for each well, grouping the characteristic values into groups representative of groups of wells and comparing the characteristic values with each other in each group to determine a MIC value for each group of wells;

(2) a computer-readable medium with instructions for performing the operations of method (A), and

(3) a computer-readable medium with instructions for performing the operations of method (B).

USE - The method is useful for analyzing the antibiotic susceptibility of biological samples and for determining the minimum inhibitory concentration (MIC) values of antimicrobial materials.

ADVANTAGE - The method uses multiple growth indicators to provide increased accuracy and integrity of results.

Dwg.0/12

FS CPI EPI
FA AB
MC CPI: B11-C07/B2; B11-C08B; B11-C08C; B11-C09; B12-K04A4; B14-A01
EPI: S03-E04A5
TECH UPTK: 2002-0218

TECHNOLOGY FOCUS - BIOLOGY - Preferred Method: The sample is contained in a series of sample wells and steps (a)-(d) are performed on each well at a series of time intervals so that step (d) provides a set of growth indicator values for each well at each time interval.

The method also comprises mathematically combining certain values in the sets of growth indicator values for each well to provide a characteristic value for each well, optionally grouping the characteristic values into groups representative of groups of wells and comparing the characteristic values with each other in each group to determine in which wells within each group sample growth is inhibited.

L110 ANSWER 2 OF 20 WPIX (C) 2002 THOMSON DERWENT
AN **2002-050099** [07] WPIX
CR 2001-670111 [69]
DNN **N2002-036924**
TI Method and device for analysis of substance mixtures using spectral analysis employs binary filters.
DC **S03**
IN BPPICH, B; MUELLER, G
PA (**BECT**) **BECTON DICKINSON & CO**; (LASE-N) LASER & MEDIZIN TECHNOLOGIE GMBH
CYC .
PI DE 10018940 A1 20011018 (200207)* 13p G01N021-25
AU 2001065863 A 20011030 (200219) G01N021-31 <--
ADT DE 10018940 A1 DE 2000-10018940 20000417; AU 2001065863 A AU 2001-65863

20010406
FDT AU 2001065863 A Based on WO 200179815
PRAI DE 2000-10018941 20000417; DE 2000-10018940 20000417
IC ICM G01N021-31; **G01N021-31**
ICS G01J003-42
AB DE 10018941 A UPAB: 20020104
NOVELTY - The spectral power P(1) of the substance mixture (1) is split into N part beams by a beam splitter (2). After passing through the spectral filters (3) the remaining power is determined by broad band detectors (4). They are essentially binary filters with a 0 or 1 output depending on the wavelength. The determination of the spectral part beams transmitted is by using the algorithm described in the patent.
USE - To detect changes in substance mixtures.
ADVANTAGE - With the use of binary filters changes in the substances produce maximum changes in the signal vectors formed from the signals from the individual detectors.
DESCRIPTION OF DRAWING(S) - The figure shows a block diagram of a method to the present invention..
Substance mixture 1
Beam splitter 2
Spectral filters 3
Detectors 4
Spectral power P(1)
Dwg.1/6
FS EPI
FA AB; GI
MC EPI: S03-E04A

L110 ANSWER 3 OF 28 WPIX (C) 2001 THOMSON DERWENT
AN 2001-627011 [73] WPIX
CR 2001-060099 [70]
DNN N2001-467412 DNC C2001-187-18
TI Multiple filter photometer used for determining small concentration changes in a multiple component mixture comprises wide band detectors for receiving the transmitted or remitted radiation with filters.
DC J04 **S03**
IN EIPICH, B; MUELLER, G
PA (**BECT**) **BECTON DICKINSON & CO**; (LASE-N) LASER & MEDIZIN TECHNOLOGIE GMBH
CYC 28
PI DE 10018941 A1 20011101 (200173)* 12p G01N021-25
WO 200179815 A1 20011025 (200173) EN G01N021-31 <--
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001065863 A 20011030 (200219) G01N021-31 <--
ALT DE 10018941 A1 DE 2000-10018941 20000417; WO 2001079815 A1 WO 2001-EP3934 20010406; AU 2001065863 A AU 2001-65863 20010406
FDT AU 2001065863 A Based on WO 200179815
PRAI DE 2000-10018941 20000417; DE 2000-10018940 20000417
IC ICM G01N021-25; **G01N021-31**
ICS G01J003-36; G01N021-59
AB DE 10018941 A UPAB: 20020321
NOVELTY - Multiple filter photometer comprises three wide band detectors (4) for receiving the transmitted or remitted radiation. The detectors have filters (3) having different spectral binary transmissions of approximately 0 and 1.
USE - Used for determining small concentration changes in a multiple component substance mixture, e.g. the change of blood glucose in a living organism.

ADVANTAGE - The concentration changes can be exactly determined.
DESCRIPTION OF DRAWING(S) - The drawing shows a schematic view of the photometer.
thermal radiator 1
filters 4
wide band detectors 7
Dwg.1/8
FS CPI EPI
FA AB; GI
MC CPI: J04-B01; J04-C04
EPI: S03-A02A; S03-E04A; S03-E04B; S03-E04B1A
TECH UPTX: 20011211
TECHNOLOGY FOCUS - INSTRUMENTATION AND TESTING - Preferred Arrangement: The number of detectors used corresponds to the number of relevant different parameters of the system. The wide band filters are selected so that at least one of the filters lies on a known absorption band of the goal substance. The transmitting spectral regions of the filter are selected so that the changes in the detector signals caused by substance concentrations and surroundings parameters are maximized. A thermal radiator (1) is used as a light source.

L110 ANSWER 4 OF 20 WPIX (C) 2003 THOMSON DERWENT
AN 2001-443245 [48] WPIX
DNN N2001-327863 DNC C2001-134235
TI Near infra-red spectroscopy online process comprises analyzing constituent liquids against reference spectra data bank of binary mixtures of possible solutions.
DC J04 **S03** T01
IN BORN, J; FRICKEL, H; ITZEL, H
PA (MERE) MERCK PATENT GMBH
CYC 31
PI DE 19963961 A1 20010705 (200148)* 13p G01N021-31
WO 200104456 A1 20010705 (200148) DE G01N021-31 <--
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
W: JP US
ADT DE 19963961 A1 DE 1999-19963961 19991223; WO 2000104456 A1 WO 2000-EP12199 20001205
PRAI DE 1999-19963961 19991223
IC ICM **G01N021-31**; G01N021-35
ICS **G06F017-40**
AB DE 19963961 A UPAB: 20010914
NOVELTY - A near infra-red spectroscopy online process analyses the constituent parts of liquid mixtures using a calibration data bank holding the reference spectra of only binary mixtures of all the possible solutions in pre-defined quantitative steps.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for an apparatus for the above process.
Preferred Features: The pre-defined steps are at irregular intervals of 1-10%. The calculation of spectra consisting of three or four components is effected by a linear combination of the data bank's two-component spectra, taking their respective proportions into account. Evaluation is effected by direct comparison of the compressed full spectral data. Both the spectra measured and the reference spectra are characterized solely by an index number used in conjunction with a data reduction module. After data compression and spectral data point scale change and respective wave count, the sum product for each spectrum is registered, and the differences between the product sums is used for rapid identification of the match between the values measured and the data bank spectra. During data compression, the respective gradient for measured and reference values is coded as a series of numbers, by adding the descending and ascending spectral data points and string of numbers.
USE - The process analyzes the constituent fluid substances in chemical liquid effluent arising from chemical batch production.

ADVANTAGE - The process takes less than 30 seconds and is external to and does not interrupt a continuing main process. The process also provides a quantitative indication of water content.
Dwg.0/3
FS CPI EPI
FA AB
MC CPI: J04-B01A
EPI: S03-E04A5B; S03-E04A5L; S03-E04C; T01-C03B; T01-D02; T01-E01C; T01-E02A; T01-E02B; T01-H07/3E; T01-J04B1; T01-J07A

L110 ANSWER 5 OF 20 WPIX (C) 2003 THOMSON DERWENT
AN 2000-443019 [39] WPIX
DNN N2000-330446 DNC C2000-134864
TI Amount of fertilizer to be applied to growing grain crop, its yield and grain quality are calculated using formula.
DC C07 P11 P13 **S03**
IN HOSAKA, Y; MARUYAMA, H; NAKAMURA, N; SATAKE, J
PA (SATA) SATAKE CORP; (SATA) SATAKE ENG CO LTD; (SATA) SATAKE SEISAKUSHO KK
CYC 5
PI CA 2280779 A1 20000326 (200039)* EN 66p A 01C21-00
AU 9944890 A 20000330 (200039) A01C21-00
CN 1251737 A 20000503 (200044) A01C21-00
JP 2000300077 A 20001031 (200058) 11p A01G07-00
KR 2000022903 A 20000425 (200107) A01C21-00
ADT CA 2280779 A1 CA 1999-2280779 19990826; AU 9944890 A AU 1999-44890 19990901; CN 1251737 A CN 1999-118583 19990903; JP 2000300077 A JP 1999-254866 19990908; KR 2000022903 A KR 1999-37531 19990903
PRAI JP 1998-254866 19980908; JP 1998-254717 19980908; JP 1999-40320 19990218
IC ICM A01C021-00; A01G007-00
ICS A01G009-00; A01G016-00; **G01N021-31; G06F019-00**
AB CA 2280779 A UPAB: 20000818
NOVELTY - The amount of fertilizer to be applied to a growing grain crop is calculated using a formula including information relating the leaf blade to specific periods in the life of the crop, fertilizer application related to these periods and information about grain quality. The leaf blade information and target yields of the crop may be entered into the formula.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:
(1) estimating the yield of a grain crop using a formula using the same information as the novel formula;
(2) apparatus for determining the amount of fertilizer to be applied, crop yield or crop quality, having a memory storing the novel formula, a user data input, an arithmetic calculator and an output display showing the amount of fertilizer to be applied;
(3) apparatus for providing production information of grains, comprising a memory for storing a quality related formula obtained by analyzing growth information including leaf blade formation related to specific periods of the crops, fertilizer application information, and quality information of the grains after growth, an input section, an arithmetic section and a display section; and
(4) apparatus for providing production information of grains, comprising a memory storing a yield related formula obtained by analyzing growth information, and yield information of the grains after growth, an input section, an arithmetic section, and a display section.
USE - The formula can be used to calculate the amount of fertilizer to be applied to a crop, its yield, and the grain quality of the crop (claimed).
ADVANTAGE - The grain yield and quality can be estimated accurately before harvest.
Dwg.2/7
FS CPI EPI GMPI

FA AB; GI; DCN
MC CPI: C05-A01B; C06-D18; C11-C07B; C12-K04E
EPI: S02-E04A5
TECH UPTX: 20010816
TECHNOLOGY FOCUS - AGRICULTURE - Preferred Features: The leaf blade information is the content of nitrogen and chlorophyll, and leaf color. These are obtained by spectral analysis. The formula may also use information on soil quality.

L110 ANSWER 6 OF 30 WPIX (C) 2003 THOMSON DERWENT
AN 1998-611905 [52] WPIX
DNN N1998-476918
TI Circuit for compensation of background absorption in an atom absorption spectrometer.
DC **S03** T01 U11 V02
IN BAERWINKEL, W; EICHARDT, F
PA (ANAL-N) ANALYTIK JENA GMBH ANALYSENMESSGERAETE
CYC 1
PI DE 19616042 A1 19981014 (199852)* 15p H01F007-06
ADT DE 19616042 A1 DE 1996-19616042 19960409
PRAI DE 1996-19616042 19960409
IC ICM H01F007-06
ICS G01J003-42; **G01N021-31**; **G06F007-00**
AB DE 19616042 A UPAB: 19981215
NOVELTY - The circuit compensates the background absorption using the magnetic field of an electromagnet for producing the Zeemann effect in an atom absorption spectrometer. The circuit has a parallel circuit of two d.c. voltage sources (E1) connected in series and two switches (S1, S2) connected in series with the magnet coil (L) in series with a current measurement device (Fm) connected between their junctions.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method of controlling an electromagnet for producing the Zeemann effect in an atom absorption spectrometer.
USE - For compensation of background absorption in an atom absorption spectrometer.
ADVANTAGE - The voltage supply enables the coil current to follow any positive or negative demand value at maximum rate.
DESCRIPTION OF DRAWING(S) - The figure shows a simplified circuit diagram.
switches S1, S2
voltage source E1
coil L
current measurement device Fm
(Dwg.1/1)
FS GMI
FA AB; GI
MC EPI: S03-A07B; S03-E04A5; T01-E; T01-E01B; V02-E02X

L110 ANSWER 7 OF 30 WPIX (C) 2003 THOMSON DERWENT
AN 1999-508311 [43] WPIX
DNN N1999-378453 DNC C1999-148423
TI On-line measurement of process stream of sugar beet, sugar cane, silage, grain, fruit, vegetables, particle board or paper.
DC D12 D14 D17 P56 J04 **S03**
IN ATHERTON, P G; BERDING, N; BROTHERTON, G A; GRIMLEY, S C; LETHBRIDGE, P J; MACKINTOSH, D L; STAUNTON, S P; STAUNTON, S P
PA (SUGA-N) BUREAU SUGAR EXPERIMENT STATIONS; (SUGA-N) SUGAR NORTH LTD
CYC 84
PI WO 9944196 A1 19990902 (199943)* EN 34p G01N021-31 <--
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD

MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA
UG US UZ VN YU ZW
ZA 9811783 A 19990331 (199942) 41p G01N000-00
AU 9912186 A 19990713 (199941) G01N021-31 <--
BR 9814406 A 20001010 (200056) G01N021-31 <--
AU 727034 B 20001130 (200101) G01N021-31 <--

ADT WO 9934193 A1 WO 1998-AU951 19981117; ZA 9811783 A ZA 1998-11783 19981222; AU 9912186 A AU 1999-12186 19981117; BR 9814406 A BR 1998-14406 19981117, WO 1998-AU951 19981117; AU 727034 B AU 1999-12186 19981117

FDT AU 9912186 A Based on WO 9934193; BR 9814406 A Based on WO 9934193; AU 727034 B Previous Publ. AU 9912186, Based on WO 9934193

PRAI AU 1997-1155 19971223

IC ICM G01N000-00; **G01N021-31**
ICS G01D000-00; G01J000-00; G01N021-35; **G06F000-00**; G06K000-00

AB WO 9934193 A UPAB: 19990914

NOVELTY - On-line measurement of a process stream reads the infrared reflectance spectrum of the stream and processes it using a reference calibration equation.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(1) A system having a scanning head with a light source and collector of reflected light, a near infrared spectrophotometer with a monochromator for resolving the reflected light into a discrete wavelength, a database storing the equation and a computer.

(2) A method of on-line measurement where the equation statistically validates the reflectance spectrum.

(3) As (a) or (b) where the process stream is sugar cane.

Preferred Features: The parameter is fiber content, juice brix, juice polarisation, commercial can sugar, quality parameters, inorganic elements or process parameters. Where the material is sugar cane it may be at any stage from prepared cane to crystalline sugar. The spectrophotometer is insulated from temperature and vibration by connecting it to the scanning head by a fiber optic cable and the head has a vibration damping mounting. The system has several spectrophotometers, one of which acts as a standard for the system. The spectrum is 400 - 2500 nano m.

USE - (all claimed) Processing sugar beet, sugar cane, silage, grain, fruit, vegetables, particle board or paper

ADVANTAGE - Infrared spectrum measurements can be made on-line.

Dwg.0/6

FS CPI EPI
FA AB
MC CPI: D03-K04; D06-C; F05-A04C; F05-A07; J04-C
EPI: S03-E04A5

L110 ANSWER 8 OF 10 WPIX (C) 2001 THOMSON DERWENT
AN 1998-232733 [21] WPIX
DNN N1998-184374 DNC C1998-072749
TI Production monitoring using a near infrared spectrometer - comprises comparing two groups of spectra using algorithm to identify changes in product quality.
DC H05 J04 **S03**
IN SABY, C; SABY, C A
PA (ERAP) ELF ANTAR FRANCE; (ERAP) ELF ANTAR FRANCE SA
CYC 27
PI EP 838677 A1 19980429 (199821)* FR 11p G01N021-35 <--
R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
FR 2754899 A1 19980424 (199823) 1p G01N021-35 <--
CA 2217108 A 19980423 (199836) G01N021-25 <--
US 6012019 A 20000104 (200008) G01N021-31 <--

ADT EP 838677 A1 EP 1997-402493 19971021; FR 2754899 A1 FR 1996-12917 19961023; CA 2217108 A CA 1997-2217108 19971022; US 6012019 A US 1997-956436 19971023

PRAI FR 1996-12917 19961023

IC ICM **G01N021-25; G01N021-31; G01N021-35**
ICS G01D018-00; **G01N033-28; G01N037-00;**
G06F017-00; G06F017-10

AB EP 936677 A UPAB: 19980529
Following and surveying the function of a unit fabricating a product and/or a near infrared spectrometer fed by the product, where the spectrometer delivers spectra comprising a series of absorbence values for different wavelengths, comprises: (i) recording the spectra from the near infrared spectrometer periodically in the form of numerical data; and (ii) transforming the data from each spectrum mathematically to obtain transformed spectra. In addition the following stages are used: (i) a series of working spectra are made from the obtained spectra by choosing the wavelengths in each transformed spectrum by a method of selection; (ii) a first set of 20-50 consecutive spectra are selected from the working spectra and a second set of spectra the same size is selected so they are consecutive and out of phase to the first set; and (iii) at least one quality criterion is calculated to compare the two sets of spectra and the evolution of this criterion is followed over time.

USE - Used for monitoring industrial chemicals, petrochemicals, pharmaceuticals, foodstuffs etc..

ADVANTAGE - The process is easy to use and identifies changes in product due to dysfunctions.

Dwg.1/3

FS CPI EPI

FA AP; GI

MC CPI: B05-K; J04-C05

EPI: S03-A02; S03-E04A; S03-E04A5B; S03-E14A; S03-E14A1; S03-E14F

L110 ANSWER 9 OF 20 WPIX (C) 2000 THOMSON DERWENT

AN 1997-297819 [27] WPIX

DNN N1997-246132

TI Instrument for optical measurement of living body - has several light modules emitting light into several positions of body through optical fibres, with beams of light transmitted to surface of body picked up at several positions by photodetectors.

DC P31 **S03** S05 T01

IN KOIZUMI, H; MAKI, A; YAMASHITA, Y

PA (HITA) HITACHI LTD; (KOIZ-I) KOIZUMI H; (MAKI-I) MAKI A; (YAMA-I) YAMASHITA Y

CYC 6

PI WO 9718755 A1 19970529 (199727)* JA 14p A61B005-14
W: CA DE GB US
JP 09135825 A 19970527 (199731) 13p A61B005-14
JP 09149894 A 19970610 (199735) 11p A61B005-14
JP 09149900 A 19970610 (199735) 9p A61B010-00
GB 2311854 A 19971008 (199745) 19p G01N021-17 <--
DE 19681107 T 19971211 (199806) A61B006-00
GB 2311854 B 20000322 (200017) G01N021-17 <--
US 6240309 B1 20010529 (200130) A61B005-05
US 2001018554 A1 20010830 (200151) A61B005/1-00
CA 2210703 C 20011009 (200208) EN A61B005-14

ADT WO 9718755 A1 WO 1996-JP3365 19961115; JP 09135825 A JP 1995-299542 19951117; JP 09149894 A JP 1995-314196 19951201; JP 09149900 A JP 1995-311993 19951130; GB 2311854 A WO 1996-JP3365 19961115, GB 1997-13004 19970619; DE 19681107 T DE 1996-1681107 19961115, WO 1996-JP3365 19961115; GB 2311854 B WO 1996-JP3365 19961115, GB 1997-13004 19970619; US 6240309 B1 CIP of US 1995-539871 19951006, WO 1996-JP3365 19961115, US 1997-875081 19970429; US 2001018554 A1 CIP of US 1995-539871 19951006, Cont of US 1997-875081 19970429, US 2001-849439 20010507; CA 2210703 C CA 1996-2210703 19961115, WO 1996-JP3365 19961115

FDT GB 2311854 A Based on WO 9718755; DE 19681107 T Based on WO 9718755; GB 2311854 B Based on WO 9718755; US 6240309 B1 CIP of US 5603909, Based on WO 9718755; US 2001018554 A1 CIP of US 5603909, Cont of US 6240309; CA

1210703 C Based on WO 9718755
PRAI JP 1995-314195 19951201; JP 1995-299542 19951117; JP 1995-311993 19951130
REP AU 9416804; DE 4314835; DE 4314923; DE 4393335; DK 136392; DK 44693; DK 45794; EP 187530; EP 310158; EP 614645; EP 659055; FI 951673; JP 1262839; JP 4241414; JP 4505422; JP 4160144; JP 5102786; JP 5111483; JP 5261110; JP 57115232; JP 61502660; JP 6181480; JP 62231610; JP 62499; JP 63005234; JP 63305845; JP 7103864; JP 7122595; JP 7123884; JP 7204168; JP 8233727; JP 9019408; NO 951737; US 4576173; US 4800885; US 5408094; WO 8600514; WO 8912223; WO 9401209; WO 9410901
IC ICM A61B001-00; A61B005-05; A61B005-14; A61B006-00; A61B010-00;
G01N021-17
ICS A61B001-00; A61B005-00; A61B006-03; F41K013-06; **G01N021-27;**
G01N021-31; G01N033-49; G06F003-00
AB WO 9718755 A UPAB: 19970731
The optical measurement instrument has a light source (1) which includes several light modules (2(1) to 2(16)) which emit intensity-modulated beams of light at different frequencies through optical fibers (8-1 to 8-16) so that they can be introduced into the living body (9) at several points. The beams of light passing through the body are picked up on the surface of the living body (9) and guided to photodetectors (11-1 to 11-25) through optical fibers (10-1 to 10-25).
The signals from the photodetector (11-1 to 11-25) are inputted to a lock-in amplifier module (12), where the intensity of the return beam detected by each of the photodetectors and having the same modulation frequency as that of its corresponding input beam is selectively measured. The intensities of beams of light picked up at several positions are processed by a data processor (16).
ADVANTAGE - Internal information of living body for several pick-up positions can be obtained without crosstalk.
Dwg.1/7
FS EPI GMPI
FA AB; GI
MC EPI: S03-E04C3; S05-D01X; T01-J06A

L110 ANSWER 10 OF 20 WPIX (C) 2002 THOMSON DERWENT
AN 1997-214903 [20] WPIX
DNN N1997-177184
TI Controlling working of analyser and fabrication unit for control laboratories e.g. petroleum - using multi variate calibration of master analyser, periodic standardisation of slave analysers and calibration transfers between analysers.
DC **S03**
IN BICOUX, F; SABY, C A
PA (ERAP) ELF ANTAR FRANCE; (ERAP) ELF ANTAR FRANCE SA
CYC 19
PI EP 768522 A2 19970416 (199720)* FR 9p G01N021-27
R: BE CH DE DK ES GB IT LI NL SE
FR 2739928 A1 19970418 (199721) G01D018-00
CA 2187943 A 19970417 (199733) FR G01D021-00
JP 09178756 A 19970711 (199738) 10p G01N035-00
EP 768522 A3 19971022 (199814) G01N021-27
IL 119427 A 20000131 (200015) G01N021-00
US 6128544 A 20001003 (200050) G06F019-00 <--
ADT EP 768522 A2 EP 1996-402187 19961015; FR 2739928 A1 FR 1995-12087 19951016; CA 2187943 A CA 1996-2187943 19961015; JP 09178756 A JP 1996-304453 19961016; EP 768522 A3 EP 1996-402187 19961015; IL 119427 A IL 1996-119427 19961015; US 6128544 A US 1996-732117 19961015
PRAI FR 1995-12087 19951016
REP No-SR.Pub; 1.Jnl.Ref; US 4866644; US 5243546; US 5459677
IC ICM G01D018-00; G01N021-00; G01N035-00; **G06F019-00**
ICS G01D021-00; **G01N021-31;** G01N021-35; **G06F015-18;**
G06F017-10

ICA G01N021-27
AB EP 764532 A UPAB: 19970516
The method of following and controlling the operation of a slave analyser linked to a fabrication unit uses an operation of multivariate calibration of the master analyser and periodic standardisation operations of signals delivered by the slave analyser fed by products of standardisation.
Calibration transfer operations between the master and slave analysers are undertaken including the calculation of parameters associated with a calibration transfer algorithm and the choice of a control indicator. The evolution of the indicator is reviewed at the start of each periodic standardisation operation and used to check the correct working of the slave analyser and fabrication unit.
USE/ADVANTAGE - Also for research laboratories and manufacturing units in chemical, pharmaceutical, cosmetic, food and agricultural industries. Method enables causes of drift and malfunction to be identified.
Dwg.0/0
FS EPI
FA AB
MC EPI: S03-E04A1; S05-E04T

L110 ANSWER 11 OF 20 WPIX (C) 2003 THOMSON DERWENT
AN 1994-351279 [44] WPIX
DNN N1994-276640
TI Instantaneous spectroscopic analysis system for fluid - uses correlation of spectrum produced with those held in memory to determine relative concentration of various products in fluid sample.
DC **S03** T01
IN PACHINGER, C; MARTIN-BOYER, M; NAFFRECHOUX, E; SUPTIL, J
PA (UYSA-N) UNIV SAVOIE
CYC 2
PI FR 2704690 A1 19941104 (199444)* 19p G01N021-27
WO 9425837 A1 19941110 (199444) FR 16p G01J003-28
EP 647316 A1 19950412 (199519) FR G01J003-28
US 5528363 A 19960618 (199630) 6p G01J003-16
ADT FR 2704690 A1 FR 1993-5204 19930427; WO 9425837 A1 WO 1994-FR478 19940427; EP 647316 A1 EP 1994-914451 19940427, WO 1994-FR478 19940427; US 5528363 A WO 1994-FR478 19940427, US 1994-360744 19941222
FDT EP 647316 A1 Based on WO 9425837; US 5528363 A Based on WO 9425837
PRAI FR 1993-5204 19930427
REP 06Jnl.Ref; EP 368660; EP 390087; EP 510832; GB 2217026; WO 9013810
IC ICM G01J003-16; G01J003-28; G01N021-27
ICS G01J003-50; **G01N021-31**; **G06F015-20**
AB FR 2704690 A UPAB: 19941208
The detection and identification system operates by illumination of the medium being examined by a monochromatic or polychromatic light wave (A), and processing of the resulting emission, absorption or reflection spectrum. This is achieved with a plane field monochromator (5) and a transformation circuit (6) producing analogue or digital signals.
The circuit is coupled to a central processing unit (7) analysing the spectrum produced for comparison and correlation with spectra stored in memory. As a result of this comparison, the concentration of various physico-chemical products within the medium may be determined.
ADVANTAGE - System provides instantaneous analysis of composition of fluid.
Dwg.1/1
FS EPI
FA AB; GI
MC EPI: S03-E04A1; T01-J05A
ABEQ US 5528363 A UPAB: 19960731
A compact portable device capable of operating in a hostile environment to carry out qualitative and quantitative identification of one or of a plurality of physicochemical entities contained in a sample capable of

producing a spectra under excitation by electromagnetic waves that includes:

a portable compact casing that shields equipment housed therein from magnetic fields, electric fields, and external pressure variations;

a polychromator having an optical path within said casing to which emissions, absorption or reflective spectrum of a liquid, solid or gas sample are transmitted and analyzed, having said spectrum being decomposed into a sequence of signals having discrete variation in wavelength;

detecting means for detecting said discrete wavelength signals positioned on the optical path of the polychromator;

conversion circuit means coupled to said detecting means for converting said discrete wavelength signals into electrical signals; and,

processing means having a plurality of standard spectra represented of known entities in memory for analyzing the spectra embodied in said electric signals and to decorrelate and compare the spectra with that stored in memory and to determine the nature and concentration in said sample.

Dwg.1/1

L110 ANSWER 12 OF 20 WPIX (C) 2002 THOMSON DERWENT
AN 1994-279847 [34] WPIX
DNN N1994-219469 DNC C1994-127736
TI Optical measuring unit for modifications in reactive substance in transparent cell - passes light through cell and then through filters to brightness measuring elements.
DC J04 **S03**
IN DELIGNIERES, B; DUBAND, C
PA (INSP) INST FRANCAIS DU PETROLE
CYC 19
PI WO 9418543 A1 19940818 (199434)* 30p G01N021-31 <--
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
W: CA JP US
FR 2701318 A1 19940812 (199434) 16p G01N021-31 <--
EP 635127 A1 19950125 (199508) EF G01N021-31 <--
R: BE DE GB IT NL SE
JP 08501394 W 19960213 (199613) 13p G01N021-79
US 5640220 A 19970617 (199730) 10p G01N021-25
EP 635127 B1 19990616 (199926) EF G01N021-31 <--
R: BE DE GB IT NL SE
DE 69418431 E 19990722 (199934) G01N021-31 <--
ADT WO 9418543 A1 WO 1994-FR120 19940131; FR 2701318 A1 FR 1993-1513 19930209; EP 635127 A1 EP 1994-905765 19940131, WO 1994-FR120 19940131; JP 08501394 W JP 1994-517711 19940131, WO 1994-FR120 19940131; US 5640220 A WO 1994-FR120 19940131, US 1995-302783 19950127; EP 635127 B1 EP 1994-905765 19940131, WO 1994-FR120 19940131; DE 69418431 E DE 1994-618431 19940131, EP 1994-905765 19940131, WO 1994-FR120 19940131
FDT EP 635127 A1 Based on WO 9418543; JP 08501394 W Based on WO 9418543; US 5640220 A Based on WO 9418543; EP 635127 B1 Based on WO 9418543; DE 69418431 E Based on EP 635127, Based on WO 9418543
PRAI FR 1993-1513 19930209
REP US 3901776; US 3915584
IC ICM G01N021-25; **G01N021-31**; G01N021-79
ICS G01J003-46; G01N021-27; **G06F015-46**
AB WO 9418543 A UPAB: 19940913
The unit consists of at least one light source (1) with two optical branches (11,12) which allow the incident light to be passed selectively through the cell (3), an optical system (7,8) to direct the emergent light rays through selective optical filters (F1, F2, F3) of different wavelengths, and measuring elements (D1, D2, D3) for the intensity of light passing through the filters.

The emergent light rays from the cell and a neutral filter (f) can be passed selectively through the filters by means of two shutters (O1,O2) and a switching system (M,I). The unit also incorporates a control

assembly (9) with a command processor (10), a signal acquisition unit (11), and an interface assembly (12).

USE/ADVANTAGE - Appts. can be used for determining the pH of a substance. More precise and reliable results are obtd.

Dwg.1/6

FS CPI EPI
FA AB; GI
MC CPI: J04-C
EPI: J04-E04A5

ABEQ US 5660210 A UPAB: 19971209

A device for optically measuring modifications in a reacting substance contained in a transparent cell, comprising

a single light source provided with an electric supply voltage and a specified light spectrum, a first optical circuit, a first optical shutter arranged in said first optical circuit, a second optical circuit, a second optical shutter arranged in said second optical circuit, an optical diverter in said optical circuits for diverting incident light from the single light source through the cell and through a reference medium to an optical node, an optical separator for directing light from the optical node to three other optical circuits, a set of three selective filters arranged respectively in the three other optical circuits, a first selective filter from the set being centred on a first wavelength corresponding to an isobestic point of the reacting substance, a second selective filter from the set being centred on a wavelength in a part of the light spectrum where the reacting substance is the most sensitive and a third selective filter from the set being centred on another part of the light spectrum where the reacting substance is the least sensitive, a measuring means for respectively measuring the light emanating from the three other optical circuits, including a set of three detectors for respectively detecting light passed by each of the set of three filters and producing output signals representing the detected light, an electric power supply for providing the electrical supply voltage, a controller and an electric switching means controlled by the controller for connecting intermittently the three detectors to the controller, for connecting the single light source to the power supply, and for selectively switching the optical shutters.

Dwg.1/6

L110 ANSWER 13 OF 30 WPIX (C) 2002 THOMSON DERWENT
AN 1994-241905 [28] WPIX
DNN N1994-194047
TI Spectrometer with dynamically coded components - has data carriers, readers, writers and central computer for coded data characterising replaceable components.
DC **S03**
IN HAPP, H; SIMON, A; WEIL, J
PA (BRUK-N) BRUKER ANALYTISCHE MESSTECHNIK; (BRUK-N) BRUKER ANALYTISCHE MESSTECHNIK GMBH
CYC 3
PI DE 4241905 A1 19940616 (1994.5)* 8p G01J003-02
DE 4241905 C2 19950126 (1995.5) 7p G01J003-02
US 5557544 A 19960917 (1996.4) 7p H01J003-02
ADT DE 4241905 A1 DE 1992-4241905 19921211; DE 4241905 C2 DE 1992-4241905 19921211; US 5557544 A US 1993-164390 19931209
PRAI DE 1992-4241905 19921211
IC ICM G01J003-02; H01J003-02
ICS **G01N021-31**; G01N021-03; G01N024-10; G01N027-62; G02B027-00; **G06F013-00**
AB DE 4241905 A UPAB: 19940913
The spectrometer has a central computer, a radiation source, detector, beam divider, filter and external measurement probe. The replaceable components each have a readable data carrier (7) with coded data contg. the parameters characterizing each component. The data carrier is a chip,

esp. an EPROM or a flash-ROM.

The data carrier can be written into and contains variable, time dependent data concerning the prewritten and current characteristics of each replaceable component, e.g. operating duration, wear parameters or calibration curves. The central computer decodes the data and derives deviations.

USE/ADVANTAGE - Esp. for infrared analytic spectrometer, bit also NMR, ESR, ICR, or mass spectrometer. Dynamically coded components can be used with great flexibility at other points in same spectrometer or in other spectrometers.

Dwg.1/2

FS EPI

FA AB; GI

MC EPI: S03-A02B; S03-E04A5; S03-E07; S03-E10A

ABEQ DE 4241305 C UPAB: 19950301

An analytical, esp. IR, spectrometer has a CPU (3), fixed components and replaceable components (5) including a readable data carrier (7) with coded data on component parameters. These data can be read and transmitted (8a) to the CPU which has a decoding and decision-making programme.

One or more devices input variable time-dependent data into the data carrier on the actual condition of the replaceable components. The CPU has a programme to control the data writing device and to automatically match the data on changed component parameters on its data carrier.

ADVANTAGE - Greater component flexibility at different positions in the same or other spectrometers.

Dwg.2/.

ABEQ US 5557544 A UPAB: 19961025

An FTIR spectrometer comprising:

an interchangeable optical component;

readable data medium means integral with the interchangeable optical component and adapted for storing encoded data concerning at least one of a history and a changeable current property of the interchangeable optical component and adapted for storing non-changeable encoded data;

read/write means connected to the data medium means for reading encoded data from and for writing encoded data to the data medium means;

a central computer adapted to decode the encoded data and to process decisions on the basis of decoded data and adapted to process the encoded data for controlling the read/write means to automatically update changed parameters of the interchangeable optical component;

interface means connected between the read write means and the central computer for transferring the encoded data to and from the central computer; and

sensor means, communicating with the read/write means, for detecting changes in the encoded data and for generating data signals in response to the detected changes in the encoded data

Dwg.1/.

L110 ANSWER 14 OF 20 WPIX (C) 2002 THOMSON DERWENT

AN 1995-299869 [32] WPIX

DNN N1995-199136

TI Instrument for non-destructive measurement of material properties - uses data obtd. from material by sections of electromagnetic spectrum to determine material properties by data-fusion analysis.

DC **S03** T01 X11

IN BECTER-BAR, E P

PA (SGII-N) SGI INT

CYC 18

PI WO 9531670 A1 19951123 (199532)* EN 32p G06F015-46 <--

RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL OA PT SE

W: AU BR CA JP KR NO PL RO RU UA

AU 9525940 A 19951205 (199615) G06F015-46 <--

US 5521844 A 19960528 (199629) 13p G01N021-47

JP 07507135 W 19950803 (199539) 10p G01N022-00

ADT WO 9315470 A1 WO 1993-US704 19930126; AU 9335340 A AU 1993-35340 19930126; US 5291422 A US 1992-826789 19920128; JP 07507153 W JP 1993-513396 19930126, WO 1993-US704 19930126

FDT AU 9335340 A based on WO 9315470; JP 07507153 W Based on WO 9315470

PRAI US 1992-826789 19920128

REP US 4717261; US 4816417; US 4933289; US 5137269

IC ICM G01N021-47; G01N033-00; **G06F015-46**

ICS **G01N021-31**; G01N033-22

AB WO 9315470 A UPAB: 19940919

Samples (14) are carried by conveyor belt (16) past an array of sensors (20), each of which stimulates electromagnetic spectrum from the samples and detects that radiation. Each sensor has an associated microprocessor controller (22) which feeds detected data to a data processing computer (18). The data processor merges the data from the sensors by matrix techniques and passes the results to the user via a communication path (26). The user can also supply instructions and additional data e.g. from other forms of measurement to the data processor.

USE/ADVANTAGE - Analysis of e.g. coal, food products, wood, cement, petroleum. Multiple measurements performed automatically on a single sample eliminate need for multiple samples, increase accuracy and save both time and effort. Properties difficult to measure directly may be measured indirectly more easily and the required result obtd. by data fusion techniques.

Dwg.1/4

Dwg.1/4

FS EPI

FA AB; GI

MC EPI: J03-F04A; J03-E05; J04-E06; S03-E07; S03-E14B1; T01-C06A; X11-A09

ABEQ US 5291422 A UPAB: 19940419

The non-destructive, non-contacting instrument detects electromagnetic radiation from the materials across a wide range of the electromagnetic spectrum, and combines these diverse data to derive the material property values desired.

In particular, the properties detectable through particle magnetic resonance, spectroscopy of light in the infrared-visible-ultraviolet range, and detection of X-ray and gamma ray radiation may be included in the instrument. Sensors detect each wavelength band of electromagnetic radiation, and data from all these sensors are merged in a central data processor to evaluate the material properties of interest.

USE/ADVANTAGE - Provides material property measurements quickly and automatically, using single sample of test material. Incorporates data fusion to enable information about material to be derived by correlation of disparate sensor data, with minimal human intervention required.

Dwg.1/4

L110 ANSWER 19 OF 20 WPIX (C) 2002 THOMSON DERWENT

AN 1993-116207 [15] WPIX

TI Spectroscopic determn. of one constituent in fluid mixt. - such as oil content of wax, suitable for on-line or batch measurement, avoiding need for dilution.

DC H02 J03 J04 **S03**

IN CHIMENTI, R J L; HALPERN, G M

PA (ESSO) EXXON RES & ENG CO

CYC 6

PI	EP 479472	A	19920408	(199215)*		19p	
	R: DE FR GB IT						
	CA 2050197	A	19920327	(199233)		G01N021-35	
	EP 479472	A3	19920527	(199321)			
	JP 5071156	A	19930323	(199318)		16p G06F015-00	<--
	EP 479472	B1	19960814	(199638)	EN	4p G01N021-25	
	R: DE FR GB IT						
	DE 69119390	E	19960919	(199643)		G01N021-25	
	CA 2050190	C	20010918	(200157)	EN	G01N021-25	

ADT CA 2050108 A CA 1991-2050108 19910829; EP 479472 A2 EP 1991-308682 19910924; US 5301125 A US 1990-588649 19900926; EP 479472 B1 EP 1991-308682 19910924; DE 69110390 E DE 1991-610390 19910924, EP 1991-308682 19910924; CA 2050108 C CA 1991-2050108 19910829

FDT DE 69110390 E Based on EP 479472

PRAI US 1990-588649 19900926

REP No-SR.Pub; DE 3625490; GB 2020009; US 4449819; EP 362549[illegible]

IC ICM G01N021-35; **G06F015-20**
ICS G01N021-27; **G01N021-31**

AB EP 479472 A UPAB: 19931118
Process is for spectroscopic determination of amt. of one constituent of a fluid mixt. in another constituent or in the fluid mixt. itself, following sepn. of the mixt. into its constituents, in which a spectroscopic determination of the amount alpha Nn of the Nth constituent of a fluid mixt. 0 in another constituent n of the mixt. following the sepn. of the mixt. into M constituents 1, ...M (where N = sup to M) and where, due to imperfect sepn., the amt. alpha of constituent N remains present with separated constituent n, comprises (a) determining the absorptivity aN of constituent N at a selected wavelength, or at multiple wavelength, across a selected wavelength range, in which constituent N exhibits light absorption; (b) determining the absorptivity an of the other constituent n with the amt. alpha of constituent N present at the same selected wavelength or by the same multiple wavelengths; and (c) determining the amount alpha of the one constituent Npresent with constituent n from a mathematical expression which contains, or is equivalent to an expression which contains, the absorptivities an and aN where the absorptivities are expressed solely as the ratio of an/aN.
USE/ADVANTAGE - The method is suitable for measuring the oil content of wax, and is suitable for on-line measurement or batch measurement, as circumstances require, the method avoiding the need for dilution. The use of the method for determining the oil content of wax obtd. by dewaxing of oil boiling in the lubricating oil range is specifically claimed.
5/6
ress

FS CPI EPI

FA AB; GI

MC CPI: A05-K; J04-E01A
EPI: S03-E04A5; S03-E04B1A

AEEQ EP 479472 A UPAB: 19931006
Process is for spectroscopic determination of amt. of one constituent of a fluid mixt. in another constituent or in the fluid mixt. itself, following sepn. of the mixt. into its constituents, in which a spectroscopic determination of the amount alpha Nn of the Nth constituent of a fluid mixt. 0 in another constituent n of the mixt. following the sepn. of the mixt. into M constituents 1, ...M (where N = sup to M) and where, due to imperfect sepn., the amt. alpha of constituent N remains present with separated constituent n, comprises (a) determining the absorptivity aN of constituent N at a selected wavelength, or at multiple wavelength, across a selected wavelength range, in which constituent N exhibits light absorption; (b) determining the absorptivity an of the other constituent n with the amt. alpha of constituent N present at the same selected wavelength or by the same multiple wavelengths; and (c) determining the amount alpha of the one constituent Npresent with constituent n from a mathematical expression which contains, or is equivalent to an expression which contains, the absorptivities an and aN where the absorptivities are expressed solely as the ratio of an/aN.
USE/ADVANTAGE - The method is suitable for measuring the oil content of wax, and is suitable for on-line measurement or batch measurement, as circumstances require, the method avoiding the need for dilution. The use of the method for determining the oil content of wax obtd. by dewaxing of oil boiling in the lubricating oil range is specifically claimed.
5/6

AEEQ US 5301125 A UPAB: 19940517

When separating a fluid mixture into fractions, the amount of the Nth constituent remaining in another constituent n is determined by measuring the light absorption of N and n and determining the amount of N in n using an expression in which the absorptions are expressed solely as the ratio an/aN. The method is partic. for determination of the entrained oil content of wax resulting from separation of a waxy raffinate into dewaxed hydrocarbon oil boiling in the lubricating oil range, with solvent added to samples of wax and oil fractions before the determination.

ADVANTAGE - Simplifies determn. and can be used on-line or in a batch process.

Dwg.2/8

ABEQ EP 47447J B TPAB: 19950721

A method for the spectroscopic determination of the amount aNn of the Nth constituent of a fluid mixture N in another constituent n of the mixture following the separation of said mixture into M constituents 1,...,M (where n, N is less than M) and where, due to imperfect separation, said amount aNn of constituent N remains present with separated constituent n, said method comprising the steps of:- (i) determining the absorptivity aN of separated constituent N at a selected wavelength, or at multiple wavelengths, across a selected wavelength range, in which constituent N exhibits light absorption; (ii) determining the absorptivity an of said another separated constituent n with said amount aNn of constituent N present at the same selected wavelength or at the same multiple wavelengths; and (iii) determining the amount aNn of said one constituent N present with constituent n from a mathematical expression which contains, or is equivalent to an expression which contains, the absorptivities an and aN where the absorptivities are expressed solely as the ratio an/aN.

Dwg.7/8

L110 ANSWER 1 OF 2 WPIX (C) 2001 THOMSON DERWENT

AN 1991-311706 [43] WPIX

DNN N1991-239609

TI Atomic absorption spectrophotometer, calibration method - uses comparative technique for determining constituent of sample by measuring and storing several standards nominal values.

DC J04 S03 T01

IN MAESART, D; MAESART, E J L

PA (PHIG) PHILIPS GLOEILAMPENFAB NV; (PHIG) PHILIPS ELTRN & ASSOC IND LTD; (PHIG) KONINK PHILIPS ELECTRONICS NV; (PHIG) PHILIPS ELECTRONICS UK LTD; (PHIG) US PHILIPS CORP

CYC 9

PI EP 453036 A 19911023 (199143)*

R: CH DE FR GB LI

GB 2243211 A 19911023 (199147)

AU 9175873 A 19911024 (199150)

US 5210778 A 19930511 (199320) 9p G01J018-00

AU 648545 B 19940428 (199422) G01N021-31 <--

US 5552997 A 19960903 (199641) 10p G12B013-00

EP 453036 B1 19991201 (200001) EN G01N021-31 <--

R: CH DE FR GB LI

DE 69131806 E 20000105 (200008) G01N021-31 <--

JP 3081270 B2 20000828 (200044) 9p G01N021-27

ADT EP 453036 A EP 1991-200830 19910415; GB 2243211 A GB 1990-8422 19900420; US 5210778 A US 1991-685266 19910412; AU 648545 B AU 1991-75873 19910418; US 5552997 A Cont of US 1991-685266 19910412, Cont of US 1993-976624 19931116, US 1994-275099 19940714; EP 453036 B1 EP 1991-200830 19910415; DE 69131806 E DE 1991-631806 19910415, EP 1991-200830 19910415; JP 3081270 B2 JP 1991-115209 19910420

FDT AU 648545 B Previous Publ. AU 9175873; US 5552997 A Cont of US 5210778; DE 69131806 E Based on EP 453036; JP 3081270 B2 Previous Publ. JP 04230824

PRAI GB 1990-8422 19900420

REP 4.Jnl.Ref; A...9150; DE 3406123; NoSR.Pub

IC **G01N021-31**; G01N023-06; **G06F015-20**
ICM G01J018-00; G01N021-27; **G01N021-31**; G12B013-00
ICS G01N023-06; **G06F015-20**; **G06F019-00**
ICA G01N023-20; G01N023-22
AB EP 454056 A UPAB: 19930928
The method of calibrating an analytical instrument which uses a comparative technique for determining a constituent of a sample involves measuring a characteristic of several standards having different nominal values. The measured characteristic is stored in association with its corresponding nominal values. A best straight line is determined using statistical techniques on the stored values. The quality of the calibration line is determined. When the quality of the calibration line is not acceptable, the slope of the line joining each of the stored measured characteristics and nominal values to the origin is determined. It is also determined whether the slopes have a given order.

The method comprises determining the slope of each stored measured characteristic and nominal value with respect to the first measured characteristic and nominal value. The curvature of the calibration line is determined if the slopes have a given order. If the slopes have not a given order it is indicated that the calibration line does not pass through the origin.

ADVANTAGE - Enables determination of possible causes of lack of quality of calibration line, by finding whether or not slopes are random so determining whether the problem is in precision of measurement of standards or quality of standards, or whether the points do not represent straight line through origin, but represent curved line.

1/7
FS EPI
FA AB; GI
MC EPI: S02-K09; S03-E04D; T01-J
ABEQ US 5210778 A UPAB: 19931110
The atomic absorption spectrophotometer has advice for measuring the absorbance of a number of standards of known concentration (110) and plots the measured absorbance against concentration (112). A straight line is fitted to the plotted points (102) and a quality coefft. calculated (106). If the quality coefft. is acceptable (104) the calibration line is used for measurement of samples (105). If not, then the slope of the line joining each point to the origin is determined and if the slopes are random (107) then a robust regression technique is used to fit the calibration line (109). If outliers are then detected (109) it is determined which points are outliers (110) and appropriate action taken, for example to restrict the range if the last point(s) is/are outliers (111).

2/7

If the slopes determined in step (107) are not random, then, provided more than four points remain (113), the slope of each point with respect to the first point is determined (114). If they are again not random (115), then a curved calibration line is diagnosed while if they are random, a straight line not passing through the origin is diagnosed (117). In atomic absorption spectroscopy a straight line not passing through the origin indicates a problem with the blank solution, for example, contamination.

USE - For determining chemical properties of sample.

Dwg.2/7
ABEQ US 5552997 A UPAB: 19961011
A method of calibrating an X-ray spectrometer comprising the steps of

(a) generating x-rays from at least one standard sample,

(b) measuring intensities of said x-rays for different concentrations of said standard sample,

(c) forming a representation of intensity versus concentration for each measured value of intensity with said different concentrations,

(d) determining if a best straight calibration line can be formed from said representation, and if not

(e) changing instrument parameters and/or sample preparation to achieve said best straight calibration line, and

(f) repeating said steps (a)-(d) to calibrate said x-ray spectrometer.

Dwg.1/7

L110 ANSWER 17 OF 20 WPIX (C) 2001 THOMSON DERWENT
AN 1989-001453 [01] WPIX
DNN N1989-001581
TI Optical interference, absorption or scatter determining appts. - has measured values of electromagnetic radiation intensity correlated with different sets of known values derived from model.
DC S02 **S03** T01
IN EDGAR, R F
PA (INFR-N) INFRARED ENG LTD; (INFR) INFRARED IND INC
CYC 6
PI GB 2206429 A 19890105 (198901)* 43p
EP 299646 A 19890118 (198903) EN
R: BE DE FR GB IT
US 4952061 A 19900828 (199037)
EP 299646 B1 19930505 (199318) EN 16p G01N021-31 <--
R: BE DE FR GB IT
DE 3880748 G 19930609 (199324) G01N021-31 <--
ADT GB 2206429 A GB 1987-15608 19870702; EP 299646 A EP 1988-305915 19880629; US 4952061 A US 1988-211708 19880627; EP 299646 B1 EP 1988-305915 19880629; DE 3880748 G DE 1988-3880748 19880629, EP 1988-305915 19880629
FDT DE 3880748 G Based on EP 299646
PRAI GB 1987-15608 19870702
REP A3...9033; DE 2426598; EP 230365; No-SR.Pub; SU 1234568; US 4555767; 01Jnl.Ref
IC G01B011-02; **G01N021-31; G06F000-01**
ICM **G01N021-31**
ICS G01B011-02; G01N021-35; G01N021-41; G01N021-47; G01N021-88; **G06F000-01**
AP GB 2206429 A UPAB: 19930923
Electromagnetic radiation is transmitted through or reflected from a sample. The radiation includes at least two spectrally different components so taht at least one of the components is subjected to optical interference, absorption or scatter. The components are transmitted through or reflected from the sample by respectively different amounts.

The transmittance or reflectance of the sample for each of the components is measured to derive respective measured values, before correlating by either a zero dependent correlation function (S), or a residual function (Nres). Known values having an optimum correlatin with the measured values are selected, with the selected values representing the property, or the identity of the sample which is sensed or to be determined.

ADVANTAGE - Both functions are unaffected by gain factors, thus avoiding any need to determine and to maintain absolute sensitivities of opical detectors, provide greater variation of correlation and increasing precision with which optimum correlation can be determined, especially when either the measured values, or known values are subject to error.

0/3
FS EPI
FA AB; GI
MC EPI: S02-A03A; S03-E04; T01-J06B
ABEQ EP 299646 B UPAB: 19931112
A method of sensing or determining one or more properties or the identity of a sample in which electromagnetic radiation is subject to optical interference, absorption or scatter, the method comprising the steps of: (a) causing electromagnetic radiation to be transmitted through, or reflected from said sample, said radiation including at least two spectrally different components so that at least one of said components is

subjected to said optical interference, absorption or scatter and so that said components are transmitted through, or reflected from said sample by respectively different amounts; (b) measuring the transmittance or reflectance of said sample for each of said components to derive respective measured values; (c) correlating by means of either a zero dependent correlation function 'C', or a residual function 'Nres', respectively defined by: said measured values of transmittance or reflectance with different known values representing or relating to either different values of a property of a known material, or different values which are characteristic of different known materials; and (d) selecting the known values having an optimum correlation with said measured values, the selected known values representing the property, or the identity of the sample which is sensed or to be determined.

1/3

Dwg.1/3

ABEQ US 4952061 A UPAB: 19930915

Sets of measured values of the intensity of electromagnetic radiation, which has been subject to optical interference, absorption or scatter by a sample, are correlated with different sets of known values derived from either model of the optical properties of the sample, or from an analogue technique, correlation is by means of either a zero dependent correlation function, or a normalised residual function.

Both functions are unaffected by gain factors, avoiding any need to determine and to maintain absolute sensitivities of optical detectors, provide greater variation of correlation than with techniques employing a conventional correlation coefficient.

ADVANTAGE - Increased precision with which the optimum correlation can be determined, when either the measured value, or known values are subject to error. Reduced computing time.

L110 ANSWER 1 OF 2 WPIX (C) 2003 THOMSON DERWENT

AN 1988-316508 [45] WPIX

CR 1988-316511 [45]; 1988-316519 [45]

DNN N1988-239993

TI Examination appts. for measuring oxygenation of blood - monitors variations in fitting position of illumination side fixture by detecting light reflected from object.

DC P31 **S03** S05 V07

IN HAKAMATA, H; OCAKI, T; SUZUKI, S; YAMI, S

PA (HAMM) HAMAMATSU PHOTONICS KK

CYC 5

PI EP 290272 A 19881109 (198845)* EN 11p

R: DE GB

US 4901236 A 19900213 (199011) 11p

EP 290272 B1 19931201 (199348) EN 11p A61B005-00

R: DE GB

EP 290275 B1 19940914 (199435) EN 11p A61B005-00

R: DE GB

EP 290275 B1 19950111 (199506) EN 11p A61B005-00

R: DE GB

DE 3882272 G 19930114 (199304) A61B005-00

DE 3882274 G 19930819 (199334) A61B005-00

ADT EP 290272 A EP 1988-304130 19880506; US 4901236 A US 1988-188012 19880502; EP 290272 B1 EP 1988-304130 19880506; EP 290275 B1 EP 1988-304135 19880506; DE 3882272 G DE 1988-3882272 19880506, EP 1988-304130 19880506; DE 3882274 G DE 1988-3882274 19880506, EP 1988-304135 19880506

FDT DE 3882272 G Based on EP 290272; DE 3882274 G Based on EP 290275

PRAI JP 1987-110461 19870508; JP 1987-110470 19870508; JP 1987-110466 19870508; JP 1987-110471 19870508

REP GB 2061496; GB 2075668; GB 2161929; US 3998767; US 4036192; EP 123548; EP 160768; FR 2539613; GB 2064444; US 4281645

IC A61B005-00; **G01N021-31; G06F015-42**

ICM A61B005-00
ICS G01N021-25; **G01N021-31; G06F015-42**
AB EP 390272 A UPAB: 19931116
The examination appts. measures the oxygenation using near IR light of different wavelengths. The appts. has a light source controller, an illumination side fixture, a detection side fixture a transmitted light detector and a computer to control the appts. and analyse the results. The body's heartbeat period is divided into several cycles and the transmission quantities of radiation transmitted through the head or organ are accumulated at every wavelength and for every cycle.

The computer judges whether a fitting position of the illumination side fixture has been changed on the basis of the reflection light data and the output light data.

USE - Diagnosis of cerebral tissue damage.

Dwg.0/6
FS EPI GMPI
FA AB
MC EPI: S05-E04; S05-D01
ABEQ US 4901733 A UPAB: 19900923
The examination device comprises light source for sequentially emitting electro-magnetic waves with different wavelengths, with an illumination-side fixture for making the electro-magnetic waves introduced from the light source incident on a measuring object and detects reflected electromagnetic waves from the measuring objects. A reflection light detector detects the reflected electromagnetic waves introduced from the illumination-side fixture and outputting reflection light data. An output light detector detects emitted electromagnetic waves from the light source and outputting output light data.

A computer system receives the reflection light data from the reflection light detector and output light data from the output light detector and judges whether a fitting position of the illumination-side fixture has been changed on the basis of the reflection light data and the output light data.

USE - For measuring the oxygenation in an object with electromagnetic wave transmission spectrophotometry.

ABEQ EP 390272 B UPAB: 19931116
An examination apparatus (1) for measuring the oxygenation in an object (40) with electromagnetic wave transmission spectrophotometry, comprising; light source means (LD1-LD4) for sequentially emitting electromagnetic radiation of different wavelength; an illumination-side fixture (51) for contacting the electromagnetic radiation generated by the light source means (LD1-LD4) with an object (40); a receiving-side fixture (52) for receiving electromagnetic radiation transmitted through the object (40); a transmitted light detection device (54) for detecting electromagnetic radiation received by the receiving -side fixture (52); and a computer system (6) for controlling the light source means (LD1-LD4) and the transmitted light detecting device (56) and for analysing the output of the transmitted light detecting device (56) to determine the oxygenation of the object (40). characterised in that the illumination-side fixture (51) is arranged to receive electromagnetic waves reflected from the object (40); in that the examination apparatus also includes; reflected light detection means (4) for detecting the reflected electromagnetic radiation introduced from the illumination-side fixture (51) and outputting reflected light data; and output light detection means (13) for detecting electromagnetic radiation emitted by the light source means (LD1-LD4) and outputting output light data; and in that the computer system (6) receives the reflection light data from the reflection light detection means (4) and the output light data from the output light detection means (13), and determines whether a fitting position of the illumination-side fixture (52) changes on the basis of the reflection light data and the output light data.

Dwg.1/6
ABEQ EP 390275 B UPAB: 19931116

An examination apparatus for measuring the oxygenation of an object by electromagnetic radiation transmission spectrophotometry, comprising; light source means (LD1-LD4, 38) for sequentially emitting electromagnetic radiation at a number of different wavelengths; an illumination-side fixture (32) for applying the electromagnetic radiation emitted by the light source means (LD1-LD4) to an object (40); transmitted light detection means (54) for detecting electromagnetic radiation transmitted through the object (40) and outputting transmission light data; a detection-side fixture (34) for receiving electromagnetic radiation transmitted through the object (40) and coupling it to the transmitted light detection means (54); and, a computer system (56) for controlling the light source means (LD1-LD4, 38) and the transmitted light detection means (54), receiving the transmission light data, and calculating the oxygenation in the object (40); characterised in that the illumination-side fixture (32) is equipped with a first indication means (55) for indicating if electromagnetic radiation is being emitted from the light source means (LD1-LD4); and the detection-side fixture (34) is equipped with a second indication means (55) for indicating if the transmitted light detection means (54) is in its operating condition; and, shapes and/or colours of the illumination-side fixture (32) and the detection-side fixture (34) are different to one another.
Dwg.2/11

L110 ANSWER 19 OF 20 WPIX (C) 2001 THOMSON DERWENT
AN 1997-137555 [08] WPIX
DNN N1997-113098
TI Single optical fibre transducer driving and measuring circuit - has bi-directional couplers recording signal intensities and transmitting pulsing energy to wavelength multiplexer-demultiplexer.
DC P31 **S03** S05 V07
IN MERJOH, J R
PA (**BECT**) **BECTON DICKINSON CO**; (DECE-N) DESERET MEDICAL INC
CYC 14
PI EP 772995 A 19970514 (199708)* EN 9p
R: BE CH DE ES FR GB IT LI NL SE
US 4936679 A 19900626 (199029)
CA 1320031 C 19910702 (199118)
EP 772995 B 19991006 (199945)
R: BE CH DE FR GB IT LI LU NL
DE 69511117 G 19991104 (200001)
ES 2139613 T3 20000216 (200016) G01N021-31 <--
AU 9675077 A 19970514 (199804)
ADT EP 772995 A EP 1996-308436 19961029; US 4936679 A US 1988-257239 19881112; EP 772995 B1 EP 1996-308436 19961029
FDT ES 2139613 T3 Based on EP 772995
PRAI US 1995-797290 19950211
REP A...9813; No-SR.Pub; US 3947687; US 4096910; US 4114604; US 4444498
IC ICM **G01N021-31**
ICS A61B005-00; **G01N033-41**
AB EP 772995 A UPAB: 19980202
The system has an energy source connected to a power supply for emitting bursts of energy at a predetermined colour frequency. Another energy source is connected to the power supply for emitting bursts of energy at another predetermined colour frequency. A wavelength division multiplexer/demultiplexer is associated with the two energy sources for receipt of the bursts of energy, and for combination and further transmission.

The discrete colour frequencies are maintained and the reflective energies are separated into individual channels of each frequency upon returns of the bursts of energy. A fibre optic device and delay unit are arranged for receipt of the combined bursts of energy.

USE/ADVANTAGE - For in vivo measurement of blood physiological

parameters. Enhances strong returns signal.
1/2
FS EPI GMPI
FA AB
MC EPI: J03-E04A9; S05-C01; S05-D01X; V07-K04; V07-N
ABEQ EP 220555 B UPAB: 19930428
The system has an energy source connected to a power supply for emitting bursts of energy at a predetermined colour frequency. Another energy source is connected to the power supply for emitting bursts of energy at another predetermined colour frequency. A wavelength division multiplexer/demultiplexer is associated with the two energy sources for receipt of the bursts of energy, and for combination and further transmission..

The discrete colour frequencies are maintained and the reflective energies are separated into individual channels of each frequency upon returns of the bursts of energy. A fibre optic device and delay unit are arranged for receipt of the combined bursts of energy.

USE/ADVANTAGE - For in vivo measurement of blood physiological parameters. Enhances strong returns signal.
1/2
ABEQ US 4936679 A UPAB: 19930423
The optical fibre transducer system has an energy generator for transmitting pulsing energy at various frequencies to bidirectional couplers for each frequency. The couplers record the intensity and further transmit the pulsing energy to a wavelength multiplexer/demultiplexer. The wavelength multiplexer/demultiplexer combines the supplies into a single output for an optic fibre which includes an optical delay sufficient to time separate the pulsing waves of energy. Reflected energy is transmitted back through the same wavelength multiplexer/demultiplexer, bidirectional coupler so that the recorded intensity of transmission and reflectance are comparable with system influence.

A method is also shown for use of an optical fibre system including the components set forth and the system requires the generation and combination of the various frequencies of energy in a multiplexer/demultiplexer, the delay for time separation and the detection in a bidirection coupler of transmitted and reflected energy.

USE - Catheter instrument.

L110 ANSWER 2? OF 20 WPIX (C) 2002 THOMSON DERWENT
AN 1991-647088 [36] WPIX
TI Investigating unknown substance - by comparing spectral peak table for substance with library of chemical structural units.
DC J04 **S03**
IN CARTER, R V; COATES, J P; POPI, M A; HANNAH, P W; SAVITSKY, A
PA (PERE) PERKIN-ELMER CORP
CYC 3
PI GB 2076235 A 1981[43] 1981[36]* 17p
DE 3104128 A 19811126 (199149)
US 4360302 A 19821221 (199303)
GB 2076235 B 19840201 (198405)
ADT GB 2076235 A GB 1981-3088 19810202
PRAI US 1980-119737 19800207
IC **G01N021-31; G06F015-20**
AB GB 2076235 A UPAB: 19930915
Appts. for determining the nature of an unknown substance can enter a spectral peak table for the substance into computing appts. and adjust it to a first preselected standardised format and compare it with a first library of chemical structural units in a memory. The possible units most closely corresponding to the unknown substance are listed.

The peak table is readjusted to a second preselected standardised format. A file is formed for the unknown substance including its readjusted peak table and data of the list of possible chemical structural units is compared with files in a second library each contg. data for a

known substance and including its readjusted peak table and data of its chemical structural unit. A list of known substances most closely corresponding to the unknown substance is presented.

FS CPI EPI
FA AB
MC CPI: J04-E01A
EPI: S03-E04A9; S02-E03X
ABEQ GB 2070135 B 20030915
Appts. for determining the nature of an unknown substance can enter a spectral peak table for the substance into computing appts. and adjust it to a first preselected standardised format and compare it with a first library of chemical structural units in a memory. The possible units most closely corresponding to the unknown substance are listed.

The peak table is readjusted to a second preselected standardised format. A file is formed for the unknown substance including its readjusted peak table and data of the list of possible chemical structural units is compared with files in a second library each contg. data for a known substance and including its readjusted peak table and data of its chemical structural unit. A list of known substances most closely corresponding to the unknown substance is presented.

=> d his

(FILE 'HOME' ENTERED AT 06:39:28 ON 08 JUL 2002)
SET COST OFF

FILE 'HCAPLUS' ENTERED AT 06:39:41 ON 08 JUL 2002
E WILES T /AU
L1 1 S E6
E TURNER D/AU
L2 [illegible] S E3,E12
L3 [illegible] S E36,E44
L4 [illegible] S E46,E51
L5 [illegible] S E42
E O CONNEL M/AU
L6 1 S E6
E O CONNELL M/AU
L7 [illegible] S E3,E4
L8 [illegible] S E51,E18,E61
E PARMIGIANI G/AU
L9 [illegible] S E5
E CLYDE M/AU
L10 [illegible] S E4,E6,E7
L11 [illegible] S (BECTON?(L)DICKIN?)/PA,CS
E MATHEMATIC/CT
E E3+ALL
L12 [illegible] S E1
E E4+ALL
L13 [illegible] S E3,E5
L14 [illegible] S E2
L15 [illegible] S E3+NT
L16 [illegible] S MATH?
L17 [illegible] S L16 AND L12-L15
L18 [illegible] S L11-L17
E TURBIDITY/CT
E E3+ALL
L19 [illegible] S E4
L20 [illegible] S TURBID?
L21 [illegible] S E6+NT OR E9+NT
L22 [illegible] S E10+NT
L23 [illegible] S E4,E1
E E9+ALL

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L24         4453 S E5
                 E REDOX/CT
                 E E32+ALL
L25         7901 S E4,E9
L26         5184 S E7
L27       183088 S E7+NT
                 E E19+ALL
L28       318745 S E2+NT
L29       187396 S E68+NT OR E70+NT OR E71+NT OR E72+NT
L30       100786 S REDOX
L31          540 S L18 AND L19-L24
L32         5241 S L18 AND L25-L30
L33            6 S L31 AND L32
L34         5775 S L31,L32
L35           66 S L34 AND (WAVELENG? OR WAVE LENG?)
                 E LIGHT/CT
                 E E4+ALL
L36          794 S L18 AND E8+NT
L37         9000 S L18 AND (E23+NT OR E23+NT OR E25+NT OR E26+NT OR E27+NT OR E2
L38           7. S L18 AND (E46+NT OR E47+NT OR E48+NT OR E49+NT OR E50+NT OR E5
L39         6226 S L18 AND LIGHT?
L40         2064 S L18 AND (WAVELENG? OR WAVE LENG?)
L41           26 S L18 AND WL
L42          [illegible] S L36-L41 AND L31
L43          [illegible] S L36-L41 AND L32
L44            4 S L42 AND L43
                 E SCREENING/CT
                 E E8+ALL
                 E DRUG SCREENING/CT
                 E E3+ALL
L45        18486 S E2,E1+NT
L46         4545 S E5+NT
L47            1 S L42,L43 AND L45,L46
                 E APPARATUS/CT
L48            0 S L42,L43 AND E3
L49            [illegible] S L42,L43 AND E3/CW
                 E MEASURING APPARATUS/CT
                 E E2+ALL
L50            4 S L18 AND E4,E5
L51         3[illegible] S L18 AND E3+NT
                 E E52+ALL
L52          [illegible] S L18 AND E3,E2-NT
                 E E34+ALL
L53           [illegible] S L18 AND E2+NT
L54           [illegible] S L18 AND E4+NT
L55          [illegible] S L18 AND E8+NT
L56         3475 S L49-L55
L57           [illegible] S L56 AND L31
L58           [illegible] S L56 AND L32
L59           5[illegible] S L57,L58
L60         1088 S L18 AND G01N/IC,ICM,ICS
L61           [illegible] S L60 AND L34
L62           [illegible] S L61 AND L35-L50
L63           44 S L61-L62
L64           [illegible] S L59 AND (3 OR 10 OR 4)/SC,SX
L65           [illegible] S L59 NOT L63,L64
                 SEL DN AN 3 6
L66            [illegible] S E1-E6
L67           4[illegible] S L63,L64,L66
L68           [illegible] S L1-L11 AND L13
L69            [illegible] S L68 AND L19-L67
                 E O CONNELL M/AU
L70           [illegible] S E3,E4
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L71           19 S E51,E52,E60
L72            2 S L18 AND L70,L71
L73            8 S L68,L72 AND L19-L67
                 SEL DN AN 5-8
L74            4 S L73 NOT E1-E12
L75           38 S L67 AND (PD<=20000531 OR PRD<=20000531 OR AD<=20000531)
L76           41 S L74,L75
L77           41 S L76 AND L1-L76
                 SEL DN AN L77 4 6 10 11 16 17 21 24-28 33 34 38 39 41
L78           24 S L77 NOT E13-E63
L79           24 S L78 AND (GROWT? OR CONCENTR? OR LIGHT? OR WAVELENG? OR WAVE LE

     FILE 'HCAPLUS' ENTERED AT 07:32:51 ON 08 JUL 2002
L80           35 S L18 AND G01N021-31/IC,ICM,ICS
L81           34 S L80 NOT L79
L82           30 S L81 AND (PD<=20000531 OR PRD<=20000531 OR AD<=20000531)
L83           20 S L82 AND L1-L82
                 SEL L83 DN AN 2 4 5 6 12 13 14 16 17 20
L84           10 S L83 NOT E64-E93
L85           10 S L84 AND (GROWT? OR CONCENTR? OR LIGHT? OR WAVELENG? OR WAVE LE

     FILE 'WPIX' ENTERED AT 07:41:24 ON 08 JUL 2002
                 E WILES T/AU
L86            1 S E4
                 E O CONNELL M/AU
L87           10 S E3,E4
                 E O CONNEL M/AU
L88            1 S E3
                 E OCONNELL M/AU
L89            9 S E3,E4
                 E PARMIGIANI G/AU
L90            2 S E3
                 E TURNER D/AU
L91           55 S E3,E13,E14
                 E CLYDE M/AU
L92            2 S E3
                 E BECT/PA
L93        2073 S (BECT?(L)DICK?)/PA
                 E BECT/PACO
                 E E3+ALL
L94        2070 S E1
L95        1380 S G01N021-31/IC,ICM,ICS
L96           6 S L95 AND C12M001-34/IC,ICM,ICS
L97         325 S L95 AND G01N033/IC,ICM,ICS
L98           1 S G06F/IC,ICM,ICS AND L97
L99           4 S L86-L94 AND L95
L100          9 S L98,L99 AND L96,L97
L101          9 S L100 AND G01N/IC,ICM,ICS
                 SEL DN AN 4-8
L102          4 S L101 NOT E1-E13
L103          7 S L96,L98-L100 NOT L101
                 SEL DN AN 1
L104          1 S L103 AND E14-E15
L105          5 S L102,L104
L106          6 S L99,L105
L107         25 S L95 AND G06F/IC,ICM,ICS
L108         17 S L107 NOT L98-L106
L109         23 S L106,L108 AND L86-L108
L110         20 S S04/DC AND L109

     FILE 'WPIX' ENTERED AT 08:01:46 ON 08 JUL 2002
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